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ABSTRACT

This is a report on instructional development activities at Illinois State University designed to improve the quality of undergraduate education. The report is organized around four basic kinds of instructional development activities that took place on the campus during 1973-74. These activities are: (1) the Instructional Development Program (IDP) that provides support funds directly to faculty members, on an approved proposal basis, to improve classroom instruction. These "minigrant" proposals are reviewed by a faculty-student committee, with awards made on the basis of the quality of the proposal and the likely success of the project in improving the quality of the educational experience in a particular class or course. Each of the 40 IDP projects funded are described briefly. (2) The summer Instructional Development Program provided 44 faculty members with grants to assist them with instructional development projects. Each project is summarized in the form of brief reports prepared by the participating faculty member. (3) The Educational Innovation Program provided funds for 11 EIP projects ranging from the Humanities Education Theatre Company to Individualized English Composition and the Special Education Junior Semester Off-Campus. Each of the projects is described. (4) The Undergraduate Teaching Assistant Program, designed to involve upper division students in the lower division instructional program and to provide assistance to faculty members teaching such courses, is described and evaluated. (MJM)

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ED 100 243

HE 006 143

1973-1974

Instructional Development

at Illinois State University

Office of Undergraduate Instruction
Instructional Development Program

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
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About the Cover Design: The Instructional Development Program at Illinois State University has one purpose: the improvement of instruction. Each identical arrow in the logo symbolizes this single objective. The contributions of the past, the potential of the future, and the multiple route to improvement are suggested by the four directions of the arrows. Together they represent a reasoned and complex process of change.

Initial conceptualization as well as the first draft of the design is the creation of Steve Dunn and Mike Summerville; the revised version, which appears obversely, is a creation of the Publications Service in the Office of Public Affairs.

Contents

Preface 1

Instructional Development Program

Austensen, R., et al.
HUMANITIES I AND II: EUROPEAN CIVILAZATION 4

Austensen, R., Kohn, W., and Fritzen, B.
GERMAN CIVILIZATION SEMESTER 4

Baker, P. NATIONAL SURVEY OF MASS
INSTRUCTION IN SOCIOLOGY 4

Blankenship, S. TEACHING PHILOSOPHY OF
EDUCATION THROUGH CHILDREN'S LITERATURE 5

Brake, R., Cragan, J., and Hirsch, R.
SPEECH COMMUNICATION 110 RESOURCE BANK 5

Brake, R. NONVERBAL COMMUNICATION
VIDEOTAPE REPLAY 5

Brake, R. COMMUNICATION CRITICISM: STUDENT-CENTERED
LEARNING ABOUT THE POPULAR AND FINE ARTS 6

Buehlmann, D. ALEX MATERIALS FOR
INTRODUCTORY ACCOUNTING 6

Buehlmann, D. AICPA ACCOUNTING TESTING PROGRAM 6

Chasson, R. 35 mm. BOTANY LABORATORY 7

Chizmar, J., and Koch, J. COMPUTER ASSISTED INSTRUCTION
(CAI) IN TEACHING OF ECONOMICS 7

Cohen, I. VISUAL MATERIALS FOR AMERICAN URBAN HISTORY 8

Forgey, G. INDIVIDUALIZED INSTRUCTION FOR
TEACHING PRINCIPLES OF ENGINE OPERATION—
LABORATORY INSTRUCTIONAL EXERCISES 8

Goodall, R. REVISION OF THE MEASUREMENT AND
EVALUATION STRAND OF CORE PROGRAM 8

Gray, C. INSTRUCTIONAL MATERIALS FOR
HISTORY 505 (DOCTOR OF ARTS PROGRAM) 9

Hansen, A., and Jelks, E. INVENTORYING, CATALOGING AND
ACCESSIONING THE NUEL DOWNS COLLECTION
OF ARCHAEOLOGICAL SPECIMENS 9

Hathway, R. MATHEMATICS SEQUENCE 120-121 9

4/5

Henry, R. MINI LIBRARY FOR AGRICULTURE 231 10

King, J. EXPERIMENT SIMULATOR SUPERVISOR 10

Linneman, W. FRESHMAN ENGLISH LIBRARY RESEARCH MANUAL 10

Lynn, M. THE DEVELOPMENT OF LEARNING ACTIVITY PACKAGES FOR USE IN COMPETENCY-BASED TYPEWRITING INSTRUCTION 11

McBee, J., and Fuess, F. AUDIO-TUTORIAL LABORATORY IN AGRICULTURE 11

Mead, W. AUDIOTAPE COLLECTION ON POLITICAL EXTREMISM 11

Moore, B., and Anderson, F. THE INITIATING OF AN INTERNATIONAL COLLECTION OF SLIDES OF CHILD ART AND INCREASING THE EXISTING HOLDINGS OF THE ART WORK OF CHILDREN FROM THE UNITED STATES 12

Moore, B., and Hobbs, J. THE PRODUCTION OF MEDIA PRESENTATIONS OF IN-THE-FIELD INTERVIEWS AND CLASSROOM OBSERVATIONS 12

Nelson, T. EXTERNAL EVALUATION OF PROGRAM IN FOUNDATIONS OF EDUCATION 12

Poe, D. TV CASSETTE COURSE IN BASIC ECONOMICS 13

Poultney, D., and Rehm, J. ENHANCEMENT OF MUSIC INSTRUCTION AND SELF-INSTRUCTION THROUGH DEVELOPMENT OF MATERIALS FOR THE MUSIC RESOURCE CENTER (CENTENNIAL WEST 313) 13

Reitan, E. MAKING OF SLIDES FOR USE IN ENGLISH HISTORY LECTURES 14

Retzer, K. VIDEOTAPING MOVES IN STRATEGIES FOR TEACHING MATHEMATICAL SKILLS 14

Reyman, J., and Jelks, E. SIMULATION GAMES FOR TEACHING ANTHROPOLOGY 14

Roberts, F. AMERICAN GOVERNMENT AND POLITICS (POLITICAL SCIENCE 105) FEASIBILITY STUDY 15

Rosene, P. VIDEOTAPES OF MUSICAL CONCEPTS FOR EXCEPTIONAL CHILDREN 15

Spence, L., and Otto, A. ESTABLISHMENT OF A MATHEMATICS TEST AND RESOURCE CENTER 16

Stephens, J. IMPROVEMENT OF THE TEACHING OF MANUAL COMMUNICATION SKILLS 16

Truex, W. DEVELOPMENT OF A SPORTS FILM LIBRARY USING HIGH SPEED MOTION PICTURE PHOTOGRAPHY 16

Vernon, W.: GENERAL PSYCHOLOGY MASTERY LEARNING COURSE 17

Wisely, F., and Wilford, V.: INSTRUCTIONAL DEVELOPMENT PROJECT: LIBRARY SCIENCE 310 17

Woods, H.: DEVELOPMENT OF RESOURCE MATERIALS FOR AN EXPERIMENTAL UNIVERSITY STUDIES COURSE: AGRICULTURE IN UNITED STATES 17

Wright, D.: DEVELOPMENT OF A CASSETTE LIBRARY 18

Summer Instructional Development Program

Chizmar, J.: COMPUTER ASSISTED INSTRUCTION IN THE TEACHING OF COLLEGE ECONOMICS 20

Conyne, R., et al: BLACKS AND WHITES: STUDY OF INTERRACIAL DYNAMICS 20

Couch, P. and Summers, M.: AN EXPERIENTIAL APPROACH TO BUSINESS ADMINISTRATION 220, BUSINESS ORGANIZATION AND MANAGEMENT 20

Eimermann, T.: CURRICULUM POSSIBILITIES FOR PARALEGALS 21

Firestone, F.: THE SECOND LAW OF THERMODYNAMICS IN INTRODUCTORY ECONOMICS INSTRUCTION 21

Fitch, T., et al: DEVELOPMENT OF A COMPREHENSIVE EARLY CHILDHOOD CURRICULUM PROGRAM—GRADUATE AND UNDERGRADUATE LEVELS 21

Gray, C.: DEVELOPMENT OF SEMINAR AND PRACTICUM COURSE (HISTORY 505) 22

Hill, J.: DEVELOPMENT OF AMERICAN HUMANITIES SEMINARS 22

Jones, M. and Edwards, P.: INSTRUCTIONAL KITS FOR REVIEW OF PRINCIPLES OF PHYSICS ON WHICH THE STUDY OF HUMAN MOTION IS BASED 22

Lee, D.: SOCIAL PSYCHOLOGY THROUGH LITERATURE: AN ALTERNATIVE LEARNING EXPERIENCE 23

Lemke, E.: DEVELOPMENT OF PROGRAMMED INSTRUCTIONAL MATERIALS AND RELATED PROBLEMS FOR PSYCHOLOGY 340 (STATISTICS) AND 334 (PSYCHOLOGICAL MEASUREMENT) 23

Mead, W.: FOOTAGE INDEXING OF POLITICAL EXTREMIST TAPES 23

Moore, B.: DEVELOPMENT OF PROPOSALS FOR BETTER UTILIZATION OF THE INTERNATIONAL COLLECTION OF CHILDREN'S ART 24

Reitan, E.; Kirk, J.; and Bellas, R.: HUMANITIES III, IV—BRITISH CIVILIZATION 24

Reiter, R.: APPLICATIONS OF ANALOG COMPUTERS TO THE TEACHING OF PHYSICAL CHEMISTRY 24

Roussey, R.: COMPREHENSIVE INSTRUCTIONAL PACKAGES FOR TEACHING ASSISTANTS IN FRENCH 111 AND 112 25

Sanders, H. and Hartley, D.: HUMANITIES TELEVISION PILOT PRESENTATION 25

Slan, A., et al: THE DEVELOPMENT OF AN EXPERIMENTAL PROGRAM INTEGRATING ART, MUSIC, DRAMA, HUMAN GROWTH AND CURRICULUM FOR CORE I OF THE ELEMENTARY EDUCATION UNDERGRADUATE SEQUENCE 25

Spence, L.: IMPROVING ACHIEVEMENT LEVELS IN LARGE LECTURE CLASSES OF MATHEMATICS 120 THROUGH RETESTING, II 26

Thompson, J.: AN EVALUATION OF UNIVERSITY STUDIES 26

Waimon, M., et al: THE DEVELOPMENT OF STANDARDIZED TEACHER PERFORMANCE TESTS 26

Weller, R. and Nolte, A.: DEVELOPMENT OF COMMUNITY-BASED FIELD EXPERIENCE OPPORTUNITIES 27

Wisely, F., et al: SYSTEMS APPROACH TO A MULTI-SECTIONED COURSE: SPEECH COMMUNICATION 110 27

Woods, H.: DEVELOPMENT OF EXPERIMENTAL UNIVERSITY STUDIES COURSE WITH RESOURCE MATERIAL 27

Educational Innovation Program

Banner, R.: SIMULATION, RESEARCH, AND DESIGN (SIMRAD) 30

Frahm, C., and Young, R.: INDIVIDUALIZED INSTRUCTIONAL PACKAGES IN PHYSICS 32

Gill, N., et al: EDUCATIONAL PSYCHOLOGY 35

Halinski, R.; and Wieck, D.: EVALUATION OF EDUCATIONAL INNOVATION 37

Hemmenway, R., et al: JUNIOR SEMESTER OFF-CAMPUS 39

Kagle, S., and Heissler, J.: INDIVIDUALIZED INSTRUCTION AND PREPROFESSIONAL TRAINING IN COMPOSITION 41

Kennedy, L.: PROFESSIONAL SEQUENCE DEVELOPMENT PROJECT 44

Loepp, F., et al: COMPETENCY-BASED INSTRUCTION 47

Omer, F., et al: MUSIC EDUCATION CORE 49

Pritner, C.; and Romeo, R.: HUMANITIES EDUCATION THEATRE COMPANY (HETC) 52

Reyman, J., et al. INTRODUCTION TO CULTURAL ANTHROPOLOGY 55

Undergraduate Teaching Assistant Program 60

Appendix

A. Halinski, R. and Tcheng, T. Systematic Student Input into Evaluation of an Educational Innovation Program 78

B. 1974-1975 Instructional Development Program (IDP) Application Form 90

C. 1974 Summer Instructional Development Program Application Form 94

D. 1974-1975 Undergraduate Teaching Assistant (UTA) and Application Form 98

Index 101

Preface

This is a report on instructional development activity sponsored by the Office of Undergraduate Instruction at Illinois State University, activity designed to improve the quality of undergraduate education. It is a sequel to Innovation at Illinois State University, 1972-73 (ERIC number EDO 82694), which reports similar activity for the previous academic year. It is not an attempt to summarize all University instructional improvement activities, but only those projects funded by Undergraduate Instruction.

The nature and extent of projects described herein demonstrate a very real commitment on the part of the faculty members at Illinois State to explore new and hopefully better ways for students to learn. The program represents a modest but serious attempt of one university to implement the thinking of the Carnegie Commission on Higher Education expressed in Reform on Campus: "We see the decade of the 1970's as a period of innovation, as an era that provides unusual opportunities to improve the quality of academic life, and as a period when the energy for reform that has been released can be combined with the spectrum of available innovations to provide more vital intellectual communities."

The report is published primarily as a communication device to inform members of the Illinois State University community and others interested in improvement of instruction of activities undertaken in this area at the University. Persons interested in further details should contact the faculty member(s) identified with the projects. The report is organized around the four basic kinds of instructional development activities which took place on the campus during 1973-74.

1. Instructional Development Program. The IDP provides support funds directly to faculty members, on an approved proposal basis, to improve classroom instruction. These "mini-grant" proposals are submitted at any time on forms available in Undergraduate Instruction, reviewed by a faculty-student committee, with awards made on the basis of the quality of the proposal and the likely success of the project in improving the quality of the educational experience in a particular class or course. The IDP application form for 1974-75 is included in Appendix B. Each of the 40 IDP projects funded this year is described briefly in material prepared by the responsible faculty member and edited for consistency. Approximately $50,000 was expended during the year in the IDP projects.

2. Summer Instructional Development Program. A limitation of the IDP, a regular academic year program, proved to be that it does not provide assigned time for faculty members engaged in even more substantial instructional planning and development activities. In an attempt to remedy this problem and provide a mechanism for more long-range development, a Summer IDP program was initiated for 1974. Faculty members submitted proposals, in a fashion quite similar to the University process for summer research grants, which were then evaluated by a faculty-student committee, with awards made by the Office of Undergraduate Instruction. The Summer IDP application form for 1974 is included in Appendix C. Those 44 faculty members awarded grants were each provided a month's time on the instructional development projects. Each project is summarized here in the form of brief reports prepared by the participating faculty members and edited for consistency. Approximately $75,000 was expended during the summer of 1974 on this program.

3. Educational Innovation Program. Eleven EIP projects, from among the 36 initiated in 1972-73, were selected for continued funding during 1973-74. Continuing EIP projects ranged from the Humanities Education Theatre Company to Individualized English Composition and the Special Education Junior Semester Off-Campus. A condition of funding of an EIP project is that an evaluation of project outcomes be conducted jointly with the University Measurement and Evaluation Service staff and faculty members undertaking the project. A statement is provided on each of the projects which includes both a description of the project and the status of evaluation. Approximately $100,000 was expended on continuation of these EIP projects during the year.

4. Undergraduate Teaching Assistant Program. A quite different approach to improving instruction was initiated by the Office of Undergraduate Instruction in 1973-74 with the inauguration of the Undergraduate Teaching Assistant (UTA) program. This program, designed to involve upper division students in the lower division instructional program and to provide assistance to faculty members teaching such courses, is described and evaluated in the final section. With a total of 60 UTA positions the first semester and 80 positions the second semester, approximately $65,000 was expended on the UTA program during the 1973-74 academic year. The general policy for the UTA program and application form for 1974-75 is included in Appendix D.

Appendix A, "Systematic Student Input into Evaluation of an Educational Innovation Program" by Ronald Halinski and Tse-Kai Tcheng, describes the attempt to develop a longitudinal data base for systematic student input into curricular planning and evaluation. The paper was presented at the American Education Research Association meeting in April of 1974, and it provides some insight into the effects of instructional development activity at Illinois State University.

Expressions of appreciation are in order to several individuals who assisted with the instructional development program, particularly to Dr. Jabker and Dr. Halinski. Special appreciation is expressed to members of the Instructional Development Committee for 1973-74: Professors Ed Anderson (Home Economics and Industrial Technology), Paul Baker (Sociology-Anthropology), Bernard McCarney (Economics), Barry Moore (Art), Dent Rhodes (Curriculum and Instruction), graduate student Peter Paiton (Educational Administration), and the committee chairman, Dr. Jabker. This group evaluated numerous proposals submitted for the IDP and Summer IDP programs and helped stimulate and initiate instructional improvement projects throughout the University. Appreciation is also expressed to President Gene Budig and Dean Arlan Helgeson for their support and encouragement of the program. Both Mrs. Rosemary Bauer and Mrs. Patricia Whalen in the Undergraduate Instruction office made invaluable contributions in monitoring expenditures, assembling proposals, scheduling meetings, and getting out essential reports and correspondence. Editorial assistance was provided by Jim Duffy, a graduate student in English. The initial drafts of the design for this report were done by Steve Dunn and Mike Summerville under the direction of Dr. Dean Hustuft, Department of Information Sciences. The basic "thank you" is to the faculty members who originated and carried through the projects described herein, all projects designed to improve the quality of education at Illinois State University.

Stanley G. Rives
Dean of Undergraduate Instruction

Instructional
Development
Program

Humanities I and II: European Civilization

Roy Austensen, Robert Duncan, Douglas Hartley, and Herbert Sanders
Departments of History, English, Art, and Music

The purpose of the project was continued refinement of Humanities I and II, an experimental, two semester, interdisciplinary course for University Studies, Group B. The major improvements made in the course were extended use of slides and audio cassettes in class presentations; development of additional joint presentations involving two or more faculty; and revision of the discussion sections, giving more responsibility to the graduate and undergraduate assistants.

In a questionnaire given to freshmen at ISU, "appreciation of art, music, and drama" was rated lowest on their scale of values. When this same questionnaire was administered to students who had taken Humanities I and II, "appreciation of art, music, and drama" was rated highest.

German Civilization Semester

Roy A. Austensen, Walter S. G. Kohn, and Bodo Fritzen
Departments of History, Political Science, and Foreign Languages

German Civilization was an experimental eight-week course offered during the summer of 1974 in a special session from May 20 to July 12. It included an optional field trip to Germany, Switzerland, Liechtenstein and Austria from July 13 to August 9.

With support from the United States Office of Education and the Instructional Development Program at Illinois State, German Civilization was devised to test the applicability of the overseas study model developed in Salzburg to the classroom on the home campus. It provided a new multidisciplinary alternative in University Studies. Focusing on the German-speaking peoples, it provided an integrated approach to the study of history, government, language, and culture. Like the Humanities I and II courses, it was not several courses strung together with a common theme, but rather a single, integrated offering with three faculty members from various disciplines and backgrounds contributing information and insights on German culture in its broadest sense.

The IDP support for this course was used to acquire and produce audiovisual materials for classroom use. These materials were of considerable value for both instruction and enrichment activities.

National Survey of Mass Instruction in Sociology

Paul J. Baker
Department of Sociology-Anthropology

Effective development of new teaching strategies often suffers from ignorance of various endeavors at different universities. Faculty members and administrators have limited knowledge of new developments occuring across the country. This problem was approached by conducting a national survey of universities (all schools with enrollments of 10,000 or more) regarding existing teaching practices and current plans for new approaches to mass instruction. Special attention was given to new developments in self-paced instruction, modular teaching programs, and new uses of media technology.

One hundred forty-eight schools responded to the questionnaire and numerous

innovative programs were identified by the survey. Follow-up correspondence will continue with many of these schools. The results of this survey will be presented to a workshop on mass instruction at the annual meeting of the American Sociological Association. Numerous new developments and resource materials will be shared with social science faculty at Illinois State University.

Teaching Philosophy of Education through Children's Literature
Scott Blankenship
Department of Curriculum and Instruction

In this project, children's literature was used to teach philosophy of education to elementary and special education majors. Books depicting and dramatizing the lives of children were used to illustrate and clarify the concepts of philosophy. Correspondingly, the ideas of philosophy were used to derive social, moral, and educational meaning from the literary sources.

The students were first taught formal philosophy. After this, books about children were read and a bibliography of "children's classics" was developed. Philosophical critiques of the books on children followed. The students approved the materials and procedures used.

Speech Communication 110 Resource Bank
Robert J. Brake, John F. Cragan, and Robert O. Hirsch
Department of Information Sciences

Approximately 50 sections of Speech Communication 110 are taught each semester at Illinois State University. More than 20 instructors, ranging from full professors to graduate assistants, teach the course. Maintaining continuity and quality across all sections is often difficult.

The purpose of this project was the creation of a common resource center for the instructors to expand the quantity and quality of course materials, increase the teaching strategies available to all instructors, and systematize and catalog material for efficient use. The catalog of available materials is on file in the Department of Information Sciences.

Nonverbal Communication Videotape Replay
Robert J. Brake
Department of Information Sciences

The purpose of this project was to examine contradictory verbal and nonverbal messages in small-group settings. Students from a nonverbal communication class (Speech Communication 325) were videotaped in four-member discussion groups. Individuals were also filmed performing dyadic mirror exercises. Two student-operated cameras and one remote-control unit were used to achieve maximum coverage of each student's "body language." Students viewed themselves on videotape one week later and were asked to prepare a short evaluation of the exercise and discuss it in class.

Feedback from class members indicated that their awareness of contradictory verbal and nonverbal messages increased. The exercise was found to supplement other class exercises, readings, discussions, and course materials.

Communication Criticism: Student-Centered Learning About The Popular And Fine Arts

Robert J. Brake
Department of Information Sciences

This project was an attempt to reorient a communication criticism course toward student interests. Emphasis was on broadening the scope of the Communication Criticism course from traditional pursuit of formal public speaking and structured argumentative discourse to such subtly persuasive forms of communication as films, theatre, music, architecture, and dance.

The chief means used to achieve course reorientation included a visit from a communication critic at Northwestern University and a visit to the Center for the Study of Popular Culture in Bowling Green, Ohio.

An attitude measure, the Semantic Differential, was used to collect information about the course. Student responses were generally favorable to the expanded scope of the subject. Much work remains before this course is adequately restructured to accommodate student interests in the popular and fine arts.

ALEX Materials for Introductory Accounting

David M. Buehlmann
Department of Accounting

A set of commercially prepared filmstrips and audio cassettes entitled ALEX was acquired for use in the introductory accounting sequence. Part of the material was class tested in a section of Introductory Accounting during the spring semester of 1974. An individualized instruction format was used in this test to accommodate different rates of student learning.

The ALEX materials were found to be compatible with the existing approach to Introductory Accounting. Student reactions to the organization and clarity of these materials were favorable.

Class tests indicated that students learned as well with the individualized instruction format as with the traditional lecture format. A higher percentage completed the course successfully with the individualized instruction approach than with the traditional approach.

Although most students reacted favorably to the individualized instruction approach to accounting, a minority (approximately 30%) expressed misgivings about this approach. It was concluded that individualized instruction in accounting utilizing the ALEX materials may be appropriate and successful for the majority of students, but traditional options should remain for those students who express a preference for them.

AICPA Accounting Testing Program

David M. Buehlmann
Department of Accounting

Standardized accounting examinations prepared by the American Institute of Certified Public Accountants were administered. The Level I examination was administered to all Intermediate Accounting students in the spring semester, 1974. The Level II examination was administered to 90% of the accounting majors graduating in May or August, 1974.

The Level I examination was found to be a valuable counseling tool. This

examination was a statistically significant predictor of student success in Intermediate Accounting. When combined with more traditional measures, the Level I examination also added significantly in a multiple regression equation used for predicting success in Intermediate Accounting.

The Level II examination indicated that by national standards accounting majors at Illinois State University are well prepared for the profession. The May and August, 1974, graduating classes averaged 08% on this examination.

35 mm. Botany Laboratory

Robert M. Chasson
Department of Biological Sciences

The purpose of this project was to prepare 28 instructional packages to coincide with the 28 laboratory exercises currently used in the General Botany course. A package consisted of a set of 35 mm. slides, a slide viewer, written instructions, and a series of self-test questions.

General Botany was taught with two lectures and two laboratory meetings per week. Multiple laboratory sections were scheduled Monday through Thursday. One laboratory was free all day Friday. The instructional packages were made available in the open lab from 8:00 a.m. to 5:00 p.m. on that day. This served a twofold function. It provided a makeup laboratory (previously unavailable) for those students who missed a scheduled meeting. It also provided a vehicle for assessing the feasibility of providing a modified, inexpensive, self-tutorial laboratory experience for a selected group of General Botany students.

Computer Assisted Instruction (CAI) in the Teaching of Economics

John F. Chizmar, Jr., and James V. Koch
Department of Economics

This project, designed to incorporate computer assisted instruction (CAI) into the teaching of economics, consisted of two parts. In the first part, games and other programs in economics, which the department already possessed, were implemented through the use of batch processing. One of these programs--MICROMOD--was used as a teaching aid in Industrial Organization (Economics 320) taught in the spring semester, 1974. This program is a computerized game designed to simulate much of the body of microeconomic theory dealing specifically with supply, demand, and market structure. Macroeconomic games, which the department owned, were also debugged, systematized and will be used in the fall semester, 1974, in an Honors section of Principles of Economics (Economics 100H).

The second part of this project was designed for an interactive mode. A set of macroeconomic games was obtained and a start was made in rewriting these programs so they are compatible with the PLORTS system. This interactive mode of computer assisted instruction will also be first used in the Honors section of Principles of Economics during the fall semester, 1974.

Visual Materials for American Urban History
Ira Cohen
Department of History

Students in American Urban History (History 332) compiled visual materials dealing with American cities. Slides were made of these materials and each student developed and presented a written scenario to accompany their slides. The purpose of this approach was to broaden the sensitivity of the teacher to the materials which were of greatest importance to the students and to increase the student's awareness of the extent of data on urbanism.

Individualized Instruction for Teaching Principles of Engine Operation—Laboratory Instructional Exercises
George W. Forgey
Department of Agriculture

This program converted approximately 50% of the laboratory time in Agricultural Power Units (Agriculture 232) into individualized instruction. Consisting of eight stations, the program provided students with an opportunity to quickly gain skills necessary to understand the basic principles of engine operation, engine tune-up procedures, and minor engine repair.

Every station was a complete learning situation. All had appropriate engines or engine parts, specification manuals, tools, and complete instructions for the learning exercises involving engine operation, engine tune-up, and minor engine repair. Students could begin training at any station and progress as they chose. They did not need to proceed in a consecutive manner from Station 1 through Station 8.

This type of instruction had the advantage of conserving laboratory time, offering excellent review opportunities for students having difficulty in specific areas, and providing materials necessary for development of tutorial laboratory materials.

Revision of the Measurement and Evaluation Strand of CORE Program
Robert Goodall
Department of Curriculum and Instruction

This project sought to revise instructional content in the Measurement and Evaluation Strand of the CORE Program and to identify available commercial materials that could be incorporated into instructional packages. These instructional packages will eventually form the "knowledge base" for teacher candidates in the area of Measurement and Evaluation.

A departmental committee composed of Ronald Halinski, Michael Lorber, Richard Youngs, and Robert Goodall worked throughout the semester to select essential topics and materials for inclusion in the instructional packages. Available commercial materials were reviewed and a variety of audiovisual and textual materials were ordered. The committee began developmental work on instructional packages and will continue this work throughout the summer and fall.

Development of "performance applications" utilizing simulated experiences, media presentations, and guided activities is also planned. This will insure that teacher candidates can make practical use of measurement and evaluation knowledge in assessing learner achievement.

Instructional Materials for History 505 (Doctor of Arts Program)
Charles E. Gray
Department of History

A new course, Seminar and Practicum in College History Teaching (History 505) was included in the proposed Doctor of Arts program in history. The funds for this project were used to acquire special instructional materials to be filed or stored in the History Teaching Materials Center (Schroeder 248). These materials included cassette videotapes, historical document source materials, audiotapes of historical interpretations, volumes on college teaching and research on teaching, ERIC literature searches, and self-instructional materials. In addition, consultative services from nationally recognized experts were acquired. Together, the materials and professional contacts, provide the basis for detailed planning and development of the new graduate course.

Inventorying, Cataloging and Accessioning the Nuel Downs Collection of Archaeological Specimens
Arne Hansen and Edward B. Jelks
University Museums and Department of Sociology-Anthropology

Mr. Nuel Downs gave the University Museums a large collection of native American artifacts in the fall of 1973. Until it could be accessioned and cataloged for use, this collection was of considerable monetary but little educational value.

Designed to prepare the Downs' collection for study and exhibit, this project inventoried over 25,000 items of which 10,000 were judged not accessionable. The remaining items were labeled, cataloged, classified and stored. Extensive information on the collection was gathered by interviewing Mr. Downs and organizing his notes. Also, an educational exhibit film about Mr. Downs is nearing completion. This project has produced a valuable reference collection useful for teaching and research.

Four students and an archaeological technician were employed on the project. All of the students have been engaged for the summer on archaeological projects. Their placement can be traced to the experience they gained on this project.

The project has convinced the museums of the value of maintaining the collection at the Anthropology Laboratory in Edwards Hall rather than assigning it to less accessible museum storage. Also, the museums intend to computerize the catalog as a further research tool.

Mathematics Sequence 120-121
Robert Hathway
Department of Mathematics

The purpose of this project was to organize and analyze data collected on student characteristics and performance in the Mathematics Sequence 120-121 (Algebra and Calculus for Business and Social Sciences).

This sequence has been offered by the Department of Mathematics since the fall of 1970. From the beginning, data was collected on each student entering the sequence. This data included a summary of high school background, scores on ACT tests, the American Testing Service Algebra III test, a departmental common final taken during the 120 course, and the grades received in 120 and 121. Where

appropriate, data was also included on junior college attendance and a section of 120 that had been taken.

The purpose of this study was to provide a contribution to evaluation of the entire curricular structure for teaching algebraic skills to non-mathematics majors.

Mini-Library for Agriculture 231
Reginald D. Henry
Department of Agriculture

This project was designed to gather and make accessible a complete file of blueprints, plans and drawings of all types of agricultural buildings and equipment.

These materials were obtained from agricultural engineering departments at all major American universities, wood products associations, and commercial firms that design and sell agricultural buildings and equipment. They are filed according to such areas as beef, dairy, swine, etc.

Students enrolling in Agriculture 231 use the file to select plans for a required project. Also, other faculty members and individuals have access to the plans. This is the most complete collection of plans available to faculty and students anywhere in the United States.

Experiment Simulator Supervisor
John F. King
Department of Psychology

The Michigan Experiment Simulator Supervisor (MESS) was obtained and modified for use on Illinois State's IBM 360/Model 50 computer. It is currently available for campus-wide use in a batch entry mode. There are several psychological research paradigms operational at this time and work on new routines in human learning is under way. The next logical step is to rewrite the FORTRAN IV codes into time sharing basic for use on the Psychology Department's terminals. Comparisons between traditional laboratory instruction and the use of MESS will be tested in the fall semester.

Freshman English-Library Research Manual
William Linneman
Department of English

A manual for Library-Research papers was composed by the Freshman Writing Committee and distributed to all freshmen enrolled in the introductory English course, Language and Composition (English 101). Five thousand copies of this six-page document were printed.

The manual describes a library paper, research methods including methods of documentation, samples of footnotes and bibliographic entries (following MLA form) and a list of basic periodical indexes and reference books and other bibliographic resources. It also distinguishes between plagiarism and para-phrasing, and provides advice on avoiding common footnoting mistakes.

The Development of Learning Activity Packages for Use in Competency-Based Typewriting Instruction

Mary Ann Lynn
University High School

Learning Activity Packages (LAPS) were developed, pilot-tested and revised over a three-semester period. These LAPS permitted two semesters of competency-based typewriting instruction at the high school level (currently used at University High School).

After minimum group keyboard instruction, students progressed through LAPS at their own rate. They made their own judgments as to the number of skill-building activities needed to reach competency which was demonstrated by completion of a "performance check."

Competency-based instruction in typewriting permitted students to control their rate of progress. Through LAPS they could earn a semester's credit in less than a semester or they could opt to utilize more than a semester.

LAPS eliminated unnecessary repetition for students and permitted instructors to use their time more wisely.

Audio-Tutorial Laboratory in Agriculture

James L. McBee, Jr., and Frederick W. Fuess
Department of Agriculture

The number of instructional units was increased and the existing units were revised and updated for the Audio-Tutorial Laboratory which was established under an educational innovation program in 1972-73. The laboratory has several purposes. It provides additional, flexible facilities and thus provides for increased enrollment in the courses it serves (Grain and Soybean Production, Agriculture 250; and Soil Science, Agriculture 157). It combines the use of sound tape recordings, 2x2 colored slides, film loops, diagrams and live materials to provide a greater variety of learning experiences. These will be integrated into a logical, systematic program of instruction. In addition, it gives students an opportunity to set their own pace for mastering the learning experience and provides each student with a laboratory experience which is both individualized and uniform.

Audiotape Collection on Political Extremism

Walter B. Mead
Department of Political Science

Maximum understanding of an individual is critical to studies of political extremism, deviant behavior, and personality and politics. Through inflection and emotion, the oral word communicates much better than the printed word. Thus, a collection of oral interviews of political extremists was acquired and reproduced.

Eighty of the best tapes from the collection of Mr. Gordon D. Hall (of Boston, Massachusetts,) were selected and returned to Illinois State University for duplication onto cassette tapes. Typed transcripts of 20 of the tapes and a collection of printed primary source documents relating to the taped material were also obtained. In addition, 16 tapes were contributed from Dr. Mead's private collection. Tapes and transcripts will be available through Media Services for instructional uses beginning with the fall semester, 1974.

The Initiating of an International Collection of Slides of Child Art and Increasing the Existing Holdings of the Art Work of Children from the United States

Barry E. Moore and Frances E. Anderson
Department of Art

This project was intended to accomplish the following objectives: produce slides of a portion of the INTERNATIONAL COLLECTION OF CHILD ART which is housed in the Ewing Museum of Nations, duplicate slides of children's art owned by faculty members and slides of exemplary children's work from throughout the United States, and permanently mount each slide by country, title, media, age and sex of artist, donor, and date of acquisition.

Dr. Moore and Dr. Anderson chose and photographed over 500 pieces from the international collection. The 420 slides donated (for duplication) by faculty and students represented a cross section of work from regular classroom children as well as special education children.

These slides include all of the countries represented in the international collection. They are now the nucleus of the art education slide collection filed and catalogued in the Art Curriculum and Research Center (CVA 204). Through this grant, approximately 1,000 previously unaccessible slides are available to the University community.

The Production of Media Presentations of In-The-Field Interviews and Classroom Observations

Barry E. Moore and Jack Hobbs
Department of Art

This project produced media presentations intended to supplement undergraduate course discussions, field trips, and classroom observations. The productions were originated in the field at four different school districts. Dr. Moore, Dr. Hobbs, and student helpers photographed and interviewed school personnel and videotaped four art lessons.

The interviews with art teachers and supervisors or principals were concerned with information about classroom facilities, art materials budgets, teaching loads, class size, local support for art programs, and the nature of the community.

The resulting products were four 30-minute videotapes which include interviews and exerpts from an art class (note that the final copies of these tapes are on video cassettes and one-half inch reel-to-reel tapes), and four sound-slide-sync presentations of the interviews.

All the presentations are ready for use. They are filed in the Art Curriculum and Research Center (CVA 204) and are available to the University.

External Evaluation of Program in Foundations of Education

Thomas W. Nelson
Department of Curriculum and Instruction

As a result of significant organizational and programmatic changes over the past six or seven years and the need to develop a viable contribution to the proposed doctorate in Curriculum and Instruction, the faculty in the area of Foundations of Education obtained the services of two off-campus consultants

to review and evaluate their program. These consultants, Gerald M. Reagan of Ohio State University, and Berj Harootunian of Syracuse University, examined the program and reported their findings to all concerned parties. A follow-up consultation with Dr. Reagan was held with the faculty of the Foundations area, the Chairman of the Department of Curriculum and Instruction, and the Dean of the College of Education. This resulted in a second report with further recommendations for change. Plans are now being made to implement the recommendations of these reports.

TV Cassette Course in Basic Economics
Douglas Poe
Department of Economics

The purpose of this project was to increase accessibility to the introductory economics course (Economics 100: Principles of Economics) for students who find it difficult or inconvenient to attend regularly scheduled classroom offerings. Thirty-nine black and white one-half hour videotape cassettes were made of lectures on material normally covered in this course. Printed matter dealing with ideas covered by the lecturer accompanies the tapes. Included in this material are exercises designed to drill students in the use of theories developed in the lecture.

Interest has been expressed in making this series available to the off-campus public through tape duplication and via television cable systems. The tapes will be distributed through the ISU Center for Economic Education. It is believed that this method of instruction will be especially attractive to the growing group of "universities without walls."

Enhancement of Music Instruction and Self-instruction through Development of Materials for the Music Resource Center (Centennial West 313)
David Poultney and John Rehm
Department of Music

Classroom instruction in the areas of music history, literature, and theory traditionally suffers from students' basic unfamiliarity with the body of music that forms the basis for lectures. This project created a collection of self-instruction materials--transparencies of music scores and tapes--that offered interested students significant opportunity to broaden their knowledge of music repertory.

In addition, students of music need to master the skill of reading music and correlating the written notation with the actual sound of music. For virtually all students this requires effort outside of class. Guidance will now be available through pre-recorded ear-training tapes and a basic collection of music anthologies.

Finally, since music unfolds in time, classroom teaching in music requires the use of music scores. Use of these scores makes discussion possible through suspension of time and clarification of sound. Transparencies of music scores made available to the music faculty will enhance music instruction at Illinois State University.

Making of Slides for Use in English History Lectures

Earl A. Reitan
Department of History

The purpose of this project was to make slides of pictures, maps, graphs, and other illustrative materials. Used to illustrate lectures, these materials served as a normal part of the class format for English History. Approximately 3,500 slides were made. They covered English History from Roman times to the twentieth century.

Student evaluations of the use of slides were favorable. The slides have also been used in special presentations for Adult Education and orientation of students preparing to study in Britain. The director of the project has been invited to present his method of instruction to the Midwest English History Association meeting at the University of Minnesota in October.

Videotaping Moves in Strategies for Teaching Mathematical Skills

Kenneth A. Retzer
Department of Mathematics

The purpose of this project was twofold. It videotaped strategies for teaching mathematical skills and also began incorporating instruction on these strategies into mathematics education courses.

Using a taxonomy of strategy moves developed by Cooney, Davis, and Henderson, alternative lesson plans were developed for teaching mathematical skills in the usual university high school curriculum. These lessons were videotaped in middle school, general mathematics, Algebra I, Geometry, Algebra II, and college Algebra classes, taught by the regular teachers, project staff or university faculty members.

The library of thirteen videotapes produced contains at least one example of each strategy move in the taxonomy. These tapes are in the Secondary Mathematics Materials Center and are being incorporated into mathematics education courses. Slides, prototype audiotapes, and a videotape have been produced with a view to exploring subsequent revision into a slide-sound format or 16 mm. film.

Simulation Games for Teaching Anthropology

Jonathan E. Reyman and Edward B. Jelks
Department of Sociology-Anthropology

Four commercially produced, packaged simulation games were purchased for study to determine if any or all could be used to improve the quality of teaching in certain existing anthropology courses. Their usefulness in the improvement of research designs was also examined. For one game, DIG, an archaeological simulation, two large boxes (3'x3'x2') were constructed for use as archaeological sites. These boxes will be used to provide classroom demonstrations of typical archaeological field problems and situations: stratigraphy, artifact distributions, sampling and excavation techniques. Anthropology faculty and advanced students with excellent academic records were asked to examine the games for procedures, content, and applicability to courses taught or taken. Although some modifications were suggested, the general consensus was that the games would be very useful, particularly in smaller classes.

American Government and Politics (Political Science 105) Feasibility Study

Frederick J Roberts
Department of Political Science

This project was an extension of an Educational Innovation Program project conducted during the 1972-73 academic year. (See Innovation at Illinois State University, 1972-73.) Data from this project, collected by observation, interview, testing, questionnaire, sample survey and the use of available records, resulted in over 200 pages of "working papers." The purpose of the project was twofold. It examined these papers to identify the effects of student characteristics, attitudes, interests, performance and faculty, instructional goals, styles of instruction, formats, and standards in the political science survey course. It also identified areas needing improvement.

From this investigation, a final report offering findings and recommendations was prepared and disseminated to the department. Some instructors have begun to reconsider their goals, formats, standards, and materials. Proficiency and Constitution tests have been revised, advisement procedures have been refined, a coordinator's position has been created, student evaluation questionnaires have been supplemented, preliminary planning for identifying a "CORE" pretesting program has been made, and some students have been "channeled" to special sections of Political Science 105 for the fall, 1974, semester. But efforts to make large scale changes have been delayed by departmental opposition to underlying assumptions.

Perhaps the most important outcomes of the project have been the examination of critical questions, the development of a data base and an outline for avenues of further investigation.

Videotapes of Musical Concepts for Exceptional Children

Paul E Rosene
Department of Music

This program provided college students with six videotapes and four audiotapes of exceptional children actively engaged in a variety of musical experiences. Music for the Exceptional Child (Music 371) offered technical instruction leading to musical competencies in uses of music experience in special education classrooms. But it lacked ready availability to classes of exceptional children. The video and audiotapes provided an alternative to college students viewing the actual classroom experience.

Each presentation was narrated, and college students could experience the five musical concepts (Melody, Harmony, Rhythm, Form/Style and Tone Color) as the exceptional child experienced them through various musical activities (singing, playing musical instruments, reading music, moving to music, creating music, and listening to music) designed for him. Using both public and private school settings, these tapes offered examples of actual musical experiences of the educable mentally handicapped, the trainable mentally handicapped, the profoundly handicapped, the multiply handicapped, and children diagnosed as emotionally disturbed, learning disabled, cerebral palsied, hydrocephaloid, and having Down's Syndrome.

These tapes are accessible to all at Illinois State University through a closed-circuit channel provided by the University's Media Services. They average twenty-five minutes in length and are recommended for instructional purposes only.

Establishment of a Mathematics Test and Resource Center

Lawrence E Spence and Albert D Otto
Department of Mathematics

A test and resource center was established and operated for students enrolled in Intermediate Algebra (Mathematics 107) and Algebra for Social Sciences and Business (Mathematics 120). Open at least 24 hours each week, the center served as a place where students in Mathematics 107 could take their first examination or repeat an examination. The tests were scored immediately and the staff then provided a diagnosis of weaknesses and a program of materials designed to remediate any deficiencies.

The center also contained supplemental materials for use by individual students and provided a site for tutoring services for most mathematics courses at freshman and sophomore levels.

Improvement of the Teaching of Manual Communication Skills

Joann Stephens
Department of Special Education

The general objective of this project was development of a competency level in the manual communications skills of students majoring in deaf education to make them able to communicate with the deaf in social as well as instructional settings. There were two specific goals. One was development of self-instructional modules which would allow students to learn the alphabet of finger spelling and to acquire a basic sign language vocabulary of at least 300 words. The other was development of audio and video instructional units which would expand the students' vocabularies and improve their psycho-motor competencies in manual communication with only limited student-instructor contact time.

To carry out this project, four faculty members from Northwestern University, under the leadership of Dr. Patricia Scherer, worked with Illinois State University staff. The specific objectives of the project--acquisition of a 300-word vocabulary and the production of audio and visual materials--were accomplished.

Development of a Sports Film Library Using High Speed Motion Picture Photography

Wayne O Truex
Department of Health, Physical Education and Recreation

A film library of 28 sports skills was developed and made available for students who wish to study human motion. Films were recorded at high speed (128 to 3000 frames per second) to provide slow-motion viewing for students. By using horizontal and vertical reference lines (grids) in the background as well as a timing device in the film, detailed cinematographical analysis is possible in most of the film records. Technical information about the subject's anthropometric measurements, age, skill level and other data as well as necessary information concerning photographic techniques is provided with the film.

General Psychology Mastery Learning Course
Walter M. Vernon
Department of Psychology

Two experiments were conducted within a total mastery general psychology course. First, the number of indicated performance objectives was increased by 50% and then by 100%. This failed to create any significant decline in percentage correct on examinations, thus suggesting that such increases could be a positive educational advantage. In addition, reexamination for a possible higher grade after grading of initial exams was required. This resulted in higher scores on initial exams than when reexamination was optional. More important, when reexamination was made optional, a large percentage of low-achieving students failed to reappear. This suggested value in making reexams mandatory for students achieving below the average on their initial test.

Instructional Development Project: Library Science 310
Forrest G. Wisely and Valerie Wilford
Department of Information Sciences

The task of constructing a Dewey Decimal Classification number using standard subdivisions for treatment or form of subject matter is a complex and important step in learning to classify library materials. This project developed a program for use on the Pyramid System which would supplement normal classroom instruction on this topic. The program proved valuable in producing student competence in this area and in freeing the instructor from many hours of individual instruction.

The project also showed that interaction frames in which the student stopped a Pyramid program and constructed a response before proceeding was a feasible instructional approach on the Pyramid System.

Development of Resource Materials for an Experimental University Studies Course: Agriculture in United States
Harvey S. Woods
Department of Agriculture

Limited funds were made available for travel to area farms for the purpose of photographing input-output scenes. The travel was done during April, May, and June, 1974. Additional travel will be done in the future as the total work is not completed. This was expected because certain scenes can be taken only at different times of the year. Weather conditions during the spring were not expected and delays resulted.

All slides resulting from this project will become a part of the resource material for the Experimental University Studies Course being developed.

Development of a Cassette Library

David W Wright
Department of Information Sciences

The development of an audio cassette library comprised of lectures on aspects of speech communication was the focus of this project. Experts in the various areas of speech communication, especially those with extensive knowledge in small groups and organizational communication, prepared lectures on designated topics in their fields of specialization. Examples of titles in the audio cassette library include "Leadership in Small Groups," "The Role of the Participant Observer in Organizational Communication," and "Language in Small Group and Organizational Communication."

An anticipated benefit of the communication cassette library is its probable utilization in both on-campus and off-campus educational settings. The easy portability and flexibility of the cassettes as teaching aids enhance the value of this media-oriented communication library. It is hoped that these and other features will encourage communication scholars to contribute additional titles to this newly developed cassette library.

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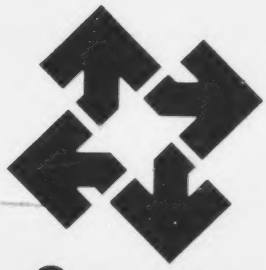

Summer
Instructional
Development
Program

Computer Assisted Instruction in the Teaching of College Economics
John Chizmar
Department of Economics

This project was designed to incorporate computer assisted instruction (CAI) as a teaching aid in the course Macro-Principles of Economics. A set of seven interactive, time-sharing mode programs were obtained from the University of Massachusetts. The programs simulated a series of realistic macro-economic models. Students were set up as policymakers and were required to maximize a number of different societal welfare functions.

The programs were written in BASIC language. But the University of Massachusett's version of BASIC was incompatible with the versions available at Illinois State University. This incompatibility required that the logic of each program be reworked.

The interactive CAI will be used first in Principles of Economics (Honors), Economics 100H, to be taught in the fall semester, 1974.

Blacks and Whites: Study of Interracial Dynamics
Robert Conyne, Lynn Rapin, Frank Bowen and R. James Clack
Departments of Curriculum and Instruction, and Psychology

This project developed a course for use in the University Studies curricula. The course is intended for any student whishing to increase awareness and understanding of interracial attitudes and improved black/white communication. The course will consist of both theoretical and experiential components. Students will attend six, three-hour, class sessions in which the first one-half hour will be devoted to viewing a videotape depicting various interracial situations. Two hours of class time will be devoted to small group discussion of topical matter presented in the videotapes. The final one-half hour of each class session will be used for theoretical inputs and discussion.

An Experiential Approach to Business Administration 220, Business Organization and Management
Peter Couch and Michael Summers
Department of Business Administration

In this project, detailed plans were developed for taking an experiential approach in the introductory management course. The approach combined a weekly lecture with small group laboratory sessions. Each student will participate in one two-hour lab session per week, working on projects and participating in exercises designed to provide experience on managerial and organizational problems. Students will be expected to gain knowledge about management practice and to improve skills in goal setting, planning, work scheduling, performance evaluation, supervision and control.

The laboratory sessions will be "managed" by advanced undergraduate students, who will be responsible for administering pre-planned exercises, supervising projects, and assisting faculty. Special materials developed for the course include a project manager's guide, guides for laboratory exercises, and a customized readings collection to supplement text materials.

Curriculum Possibilities for Paralegals
Thomas Eimermann
Department of Political Science

This project consisted of a review of materials relating to the education and use of paralegals. American Bar Association certification standards and legal assistant programs at 29 institutions were studied in depth. Journal articles and bar reports relating to the use of paralegals were also studied. Recommendations on ISU course offerings were developed. Legal Aid Internship (Political Science 389) was revised and improved.

The Second Law of Thermodynamics in Introductory Economics Instruction
Frederic Firestone
Department of Economics

This study developed methods for enriching the introductory economics course through the use of the entropy concept. The following basic concepts were isolated as those which are directly usable in this course and which significantly improve its economic content:

1. Irreversibility: distinguishes those economic processes which are time-dependent both in rate and in direction, and disposes of the frequent inference that economic process generally is reversible.
2. Resource use and re-use: establishes that the inferences of the First Law of Thermodynamics (conservation of energy-matter) which generally underlie economic analysis, are only a partial limit to use of resources, and develops the entropy notion of decreasing availability of existing energy.
3. Process: develops the nature of non-linearity of economic change.
4. Implications for the competitive model: indicates some limits of competitive efficiency in the face of energy constraints.
5. "Negentropy trap": establishes the unusual economic significance of agriculture and related industries, in increasing the earth's stock of negentropy; thus, making available more energy. Other emerging technologies of negentropy imported from outside the earth's system further increase the stock.

Development of a Comprehensive Early Childhood Curriculum Program—Graduate and Undergraduate Levels
Thomas Fitch, Minnie Berson, Al Milliren, Jeanne Morris and Ethel Mincey
Department of Curriculum and Instruction

A curriculum proposal for a bachelor's degree in early childhood education was developed during the project period. The 212 page document provided a program description, rationale, evaluation procedures, and implementation statement. A survey of local community services was also included.

Development of Seminar and Practicum Course (History 505)
Charles Gray
Department of History

The purpose of this project was planning and development of a new graduate course, Seminar and Practicum in College History Teaching (History 505). The course will be an integral part of the proposed Doctor of Arts program in history. A spring grant provided funds for the purchase of materials and consultative services related to the new course, and a summer grant provided funds for faculty time for uninterrupted, concentrated work in developing the course.

The variety of books, pamphlets, reports, and audiovisual materials obtained through the spring grant were stored and/or filed in the History Teaching Materials Center (Schroeder 248). These and other materials were utilized in detailed planning and development of History 505. Special undertakings and procedures related to planning the new course included development of course bibliographies, outlines, objectives, and teaching strategies; preparation of special handout materials; and identification of special materials and equipment for use in the course (available in Schroeder 248 or Milner Library).

Development of American Humanities Seminars
John S. Hill
Department of English

The principal aim of this project was to design a course to help students analyze aspects of the American experience in order to develop self-realization concerning these aspects as they affect American life of the past, present, and future. This resulted in the development of a 100-level, ten-hour, two-semester course which would draw upon the resources of six academic departments in two colleges and would use undergraduate teaching assistants.

Planning discussions involved writing of a rationale; selection of general themes; determination of technical aspects, such as the number of lectures, and the number of students to assign to each undergraduate assistant in small group meetings; and development of a timetable for preparation of the course and for its subsequent evaluation.

This course constitutes a new instructional option for students. Equally important, it offers a structure for determining the viability of scheduling broadly interdisciplinary courses for undergraduates.

Instructional Kits for Review of Principles of Physics on which the Study of Human Motion is Based
Margaret Jones and Philip Edwards
Departments of Health, Physical Education and Recreation, and Physics

The purpose of this project was to provide learning activities for students in order to enable them to review concepts of physics basic to kinesiology. The concepts were arranged in a particular order to facilitate understanding. This series of learning activities was formed into instructional kits to enable students to work at their own pace.

Nine study guides and instructional kits were prepared. There were three sets of the nine kigs. Plans were made for students to check out the kits.

A format for evaluation of the effectiveness of the kits was planned. One

procedure for evaluation included comparison between an experimental and control group. Another procedure involved student reaction to each of the instructional kits.

Social Psychology through Literature: An Alternative Learning Experience

Dorothy Lee
Department of Sociology-Anthropology

Fifteen standard introductory social psychology textbooks were perused for content. Approximately two dozen core concepts, principles or theoretical perspectives were delineated. Student and faculty recommendations, a search of bookstore and library offerings, and the use of review magazines and journals provided titles illustrative of most of the concepts. A card file containing an annotated bibliography of over 30 novels, science fiction stories and plays was developed. These selections are suitable for use in introductory social psychology courses. Designed to alleviate the impersonality of large lecture classes, the project materials are most suitable to small classes or experimental sections of large classes. They might also be adapted for use in discussion sessions for lecture classes or for optional reading.

Development of Programmed Instructional Materials and Related Problems for Psychology 340 (Statistics) and 334 (Psychological Measurement)

Elmer Lemke
Department of Psychology

The purpose of the project was the development of a self-instructional package suitable for the Monroe 1710 calculators. Two self-instructional videotapes and a set of exercises, suitable for use in Statistics 340 and Psychological Measurement 334, were produced. The self-instructional videotapes review basic statistical concepts and demonstrate computation on the 1710. The beginning student who wishes to operate the 1710 first checks out a self-instructional videotape cassette. After studying these materials, he returns to the calculator laboratory where he proceeds through the exercises until additional study of videotaped material becomes necessary.

Footage Indexing of Political Extremist Tapes

Walter B. Mead
Department of Political Science

The purpose of this project was to listen to 150 hours of taped interviews and speeches of political extremists. This was done to identify the subject of each tape and specific points of interest within each tape. Then each tape was catalogued by subject. This project also provided a detailed index of the specific points of interest throughout the entire tape collection in order to allow ready location of these segments and thereby facilitate the use of these resources for classroom and research purposes.

Development of Proposals for Better Utilization of the International Collection of Children's Art

Barry Moore
Department of Art

The International Collection of Children's Art presently consists of over 6,000 pieces of child art, filed and housed at the Ewing Museum of Nations. This unique resource has not been readily accessible to interested scholars. The purpose of this project was to develop specific recommendations for the present needs and future directions of the collection.

The following items and recommendations were developed or initiated as a result of this project. To insure continued and consistent growth of the collection, it was recommended that one person serve as the permanent curator. A 10-minute slide-tape presentation was developed for dissemination of information about the collection. Other such presentations were proposed. Correspondence was initiated to the International Society for Education Through Art and UNESCO to explore the possibility of collaborative efforts along this line. Recommendations pertinent to specific solicitation of art work and related software were made. The information packet about the collection was revised and translated into several languages. Recommendations were developed concerning costs and procedures for committing the total collection to slide collections both at the Ewing Museum and on campus. It was recommended that foreign students and ISU students who travel abroad be contacted for assistance in the collection's development. Recently, foreign students have helped translate information for the collection. Presently, one graduate student from ISU is collecting additional materials in Austria.

Humanities III, IV—British Civilization

Earl Reitan, John Kirk, and Ralph Bellas
Departments of History, Theatre, and English

The purpose of the project was development of a new humanities course, based on the model of Humanities I and II but dealing with British civilization. The three instructors worked through discussion and individual study to develop a course which would "make students aware of the unique character and achievements of the British people" and "demonstrate the relationships of history, literature, and theatre in the development of British civilization."

Applications of Analog Computers to the Teaching of Physical Chemistry

Richard C. Reiter
Department of Chemistry

The time in this project was used to develop expertise in the use of the analog computer and in the development and testing of analog computer programs suitable for physical chemistry exercises and lecture demonstrations.

About 50% of the subject matter of physical chemistry is found in the solutions to certain differential equations. Traditional methods of teaching such material involve obtaining and interpreting stopped time solutions to the equations. The analog computer allowed for simple rapid Dynamic display of (simultaneously) multiple solutions to differential equations, and it provided for routine experimental modifications of involved parameters.

Improved comprehension of applied differential equations, and even a limited

introduction to analog computing (which in combination with digital computing equals hybrid computing) will be a positive factor for ISU graduates in the competitive job market.

Comprehensive Instructional Packages for Teaching Assistants in French 111 and 112

Robert Roussey
Department of Foreign Languages

This project prepared for each of the 41 conversations and 25 grammar units the following:

(a) A background cultural presentation related to the subject of the conversation.
(b) A list of the new structures presented in the lesson.
(c) Teaching suggestions.
(d) Supplementary exercises for each grammar unit.
(e) Pronunciation exercises.
(f) A series of slides pertaining to the photographs in the text and cultural material presented in the text.
(g) A vocabulary list of words part of fundamental French not present in text.

Humanities Television Pilot Presentation

Herb Sanders and Douglas Hartley
Departments of Music and Art

The purpose of this project was development of a color videotape which would serve as a pilot for a series of such tapes based on Humanities I and II. The intention was to use these tapes for classroom presentations and student self-study. A long-range goal is presentation of the series over local telecable as a public service.

Two instructors prepared a 40-minute program on "Impressionism." They used art and music to illustrate their material. Since color facilities are not yet available on the ISU campus, the tape was filmed at the Springfield facilities of the State Superintendent of Public Instruction. Next year the tape will be shown in Humanities I and II.

The Development of an Experimental Program Integrating Art, Music, Drama, Human Growth and Curriculum for CORE I of the Elementary Education Undergraduate Sequence

Arnold Slan, Sherron Hill, Fred Omer, Robert Burrows, and John Sharpham
Departments of Curriculum and Instruction, Art, Music, and Theatre

The purpose of this project was to develop an instructional team which could function positively and productively in the development and teaching of an integrated arts education program.

Through discussion and planning sessions, the team critically examined individual members' perceptions about teaching styles, educational philosophies, rigidity-flexibility, and willingness to change or modify personal priorities of content within the disciplines of art, music, drama, human growth, and curriculum. From this critical analysis, the instructional team identified sensory awareness,

play, lesson planning, roles of the teacher, communication, and self-concept as six major topics that were perceived as common to the various disciplines involved. It then developed student learning experiences and evaluation criteria and organized procedures for implementing each topic. Topics of partial commonality and topics for individual instructor treatment were also identified and developed.

Improving Achievement Levels in Large Lecture Classes of Mathematics 120 through Retesting, II

Lawrence Spence
Department of Mathematics

This project was concerned with implementation of proposed changes in the Mathematics 120 course. The topics to be included in the course were selected, and a two-part competency examination which would determine whether students possessed the necessary prerequisite mathematical skills to begin the course was developed. Coordination of the Mathematics 107 and 120 courses was examined to assure that the former would provide these prerequisite skills and permit flexibility in the placement of students in these two courses. Additional materials for use in the Mathematics 120 course were also prepared.

An Evaluation of University Studies

James Thompson
Department of Agriculture

An analysis of 200 senior evaluations of 1973 graduates from ISU was used to indicate which courses were taken for University Studies credit. It was found that 70% of the University Studies credit was generated at ISU and 30% was transferred to this school. In general, while introductory and beginning courses had the greatest frequency of use for University Studies credit, upper level and advanced courses had a very low use. One hundred level courses made up over 95% of the courses evaluated for University Studies credit. Students took the most hours in Group D (10.8) and the fewest hours in Group E (7.7). They took 19.5 hours of free electives per student. Some suggestions for improvement of the program were given.

The Development of Standardized Teacher Performance Tests

Mort Waimon, Gary Ramseyer, Richard Albert, and Kenneth Miller
Departments of Curriculum and Instruction, Psychology, English, and University High

During the 1973-74 academic year, all secondary education majors in the Professional Sequence at ISU (N=600) were required to take one of eight teaching performance tests developed at UCLA as a condition of admission to student teaching. These UCLA teaching performance tests were content-neutral and standardized on UCLA field-test conditions. ISU students felt that content-specific teaching performance tests standardized on ISU field-test conditions would be more valid instruments for use in measuring their teacher effectiveness.

This project resulted in development, field-testing and initial revision of 11 instruments which can be used to assess teacher effectiveness of prospective secondary teachers at Illinois State University.

Development of Community-Based Field Experience Opportunities

Roger Weller and Ann Nolte
Department of Health, Physical Education and Recreation

This project was designed to identify, describe and classify organizations within Central Illinois which are health related. In addition, it was to establish cooperative relationships so that the health education program at the University and the agencies could become interactive.

One hundred and eight organizations were identified. Sixty-five were contacted by telephone and then sent questionnaires. Visitations were made to 14 of these organizations for in-depth exploration of their potentialities.

Organizations were classified as public, private, civic, service and commercial/industrial. Direct contact with these organizations resulted in identification of those receptive to work with students in the health education program. In addition, professionals outside of the University who would be willing to serve in a limited classroom capacity were identified.

The next steps of this project will be dissemination of information to students in the health education program and to allied programs and departments in the University. Maintenance of established relationships also will be a priority.

Systems Approach to a Multi-Sectioned Course: Speech Communication 110

Forrest Wisely, John Cragan, Robert Brake, and Ron Halinski
Department of Information Sciences, and Measurement and Evaluation Service

An instructional development team composed of two subject matter specialists, an instructional systems developer, and an evaluation expert was assembled to apply the systems approach in redeveloping the multi-sectioned course, Speech Communication 110.

After identifying the needs, the constraints, and the available resources, the team proceeded to identify general objectives for the course and determine units of study. The team also developed or identified specific objectives, content outlines, instructional approaches and materials, and evaluation methods for each unit, and developed an evaluation subsystem for the entire course.

The project produced an open-ended instructional system that will provide course continuity. At the same time it will provide each instructor with the opportunity to use his own creativity and strengths to greatest advantage. The system was designed to respond to changing needs and evaluations of instructors and students.

A syllabus containing the work of the team will be given to each instructor of the course and in-service workshops will be conducted.

Development of Experimental University Studies Course With Resource Material

Harvey Woods
Department of Agriculture

In order to offer an introduction of agriculture to university students with little or no agriculture background, resource materials (colored slides, mimeographed handouts, and overhead transparencies) have been developed in the following common areas of today's agriculture:

Economics

Soils and Crops
Soil Conservation
Livestock
Environmental Problems and Controls

These common areas have been broken down into sufficient subheadings for optimum understanding by the nonagriculture major. Lecture data has been prepared in preliminary form and correlated with the previously mentioned resource materials.

The work on this course will be continuous as agricultural technology changes; however, sufficient progress has been made to enable the project faculty to offer the course whenever desirable.

All products are on file in the office of the project faculty. The lecture materials of the course are adequate for use by any agriculture faculty member. The color slides taken, as well as those yet to be taken, will be arranged in Kodak Carousel slide trays for use by project faculty or by others upon request.

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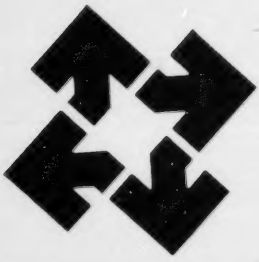

Educational
Innovation
Program

Simulation, Research, and Design (SIMRAD)
Richard Banner
Student Association

DESCRIPTION. The Simulation, Research and Design service (SIMRAD), originally part of a 1972-73 EIP Project, "Learning Resource Center," was made autonomous this year and funded through both the EIP program and the Student Association. Of the ten EIP projects funded for FY 74, SIMRAD was the only one completely directed and staffed by students.

The purpose of SIMRAD was to develop and design simulation games which could be used in various classes as a supplemental student learning experience. Normally, a professor would contact the SIMRAD staff and either request a game that was already designed or inform them of areas within which it was desired that a simulation game be developed. In the latter case, the SIMRAD staff would research the area, develop the game, and solicit reactions from the professor. Then the game was revised, when necessary, and presented to and played by the students. After each game, which might last from one to three class periods, each student was requested to fill out an evaluation questionnaire. Following the game and depending on the professor, the game and/or its implications would often be discussed in subsequent lectures.

The staff was initially composed of one director and seven game designers. For the second semester there were only four game designers. During the year, a total of six different games were played in a total of 27 classes. The History Department used four different games in seven classes. "Election 1896" was played in four different classes; and "Crisis Diplomacy," "Witch Trials," and "Election 1976" were each played in one class. The Political Science Department used the game, "Russian Revolution," in one class. Finally, the Information Sciences Department used one game, "Bond Issue," in 19 different classes. Three of the games were developed during this year. They were "Crisis Diplomach," "Witch Trials," and "Election 1976." The other three were revisions of previously developed games.

Simulations were played in 62.5 class periods, involving approximately 1,200 students, or 3,370 student hours of instruction.

EVALUATION/STATUS. Several positive benefits resulted from SIMRAD. As expressed in student evaluation forms, 82% of the students both enjoyed the simulations and felt sufficiently involved in them. This favorable response was also evident from responses to open-ended questions on the evaluation forms. Several students mentioned that the game was not only interesting, but had even prompted them to go back and restudy the corresponding material in the textbook.

A second positive factor was the educational value. Seventy-six percent of the respondents felt the games were valuable educational experiences and that more games would be worthwhile. They felt they had learned something, once the rules were understood. No concrete data concerning changes in cognitive understanding of the material are available; nevertheless, one of the history professors did remark that she felt the simulation was as detailed as the lecture but better than the lecture in giving the students a feeling for the historical context.

A side benefit of SIMRAD was the development of its role as simulations consultant for the University. The staff talked with several professors about simulations during the course of the year and the student coordinator of SIMRAD gave occasional guest lectures to various "teaching methods" classes on the methodology and potential value of simulations in the classroom.

Among the characteristics of SIMRAD, several negative features and problems were also evident. The most pervading student criticism was that the rules were too complex and confusing. Seventy-seven percent thought the games were confusing, and 53% felt the complications of learning how to play outweighed the value of the game. This confusion about rules was also mentioned by a large majority of students in the replies to open-ended questions. Fairly typical was the student who wrote: "the rules were definitely the hardest part...If it would be possible to make the rules quicker and easier to understand, the game would seem much better." The SIMRAD staff readily admitted that there was a lack of clarity and conciseness in most of the rules, but it was their intent to continue to refine the rules if time permitted.

A second negative feature of the project was a reluctance by staff members to explicitly state their objectives although they were encouraged on several occasions to do so.

The SIMRAD staff was aware of two additional problems which they were not able to effectively resolve. First was the fact that most students, having experienced only formal lecture and discussion classes during their academic careers, were not sufficiently familiar with or prepared for classroom simulation games in order to adequately benefit from them. Second was the fact that most faculty members, who apparently had not had much experience with simulation games either, were not prepared to effectively conduct the games without the assistance and in-class rule explanation from the SIMRAD staff. This was tried a few times during the spring '74 semester but each time the student reactions were quite unfavorable.

In summary, SIMRAD experienced certain problems this year; but they also met with some success, at least in terms of student reactions. That is, students generally found the simulations interesting and educationally favorable, but difficulties with confusing rules seemed to detract from their enjoyment. Problems with a loss of staff members and the possibility that students and faculty were not sufficiently prepared or experientially ready to benefit from simulations may have created additional obstacles which were difficult for SIMRAD to overcome. At the same time, simulation games did involve 1,200 students and were probably able to increase student interest and motivation in a sizeable proportion of those students involved. Also, in acting as a consultant to various

professors, SIMRAD expanded its service to the campus. Finally, it should be noted that a considerable part of SIMRAD's value was in the fact that it was a project directed and operated by undergraduates and it provided direct input into the educational process of the University.

Individualized Instructional Packages in Physics

Charles Frahm and Robert Young
Department of Physics

DESCRIPTION. In recent years, a less than optimum number of undergraduates was enrolling in upper level physics courses. At the same time, the varied vocational needs and interests of the students enrolled required more options in career-oriented or interdisciplinary areas of physics. Thus, it was decided to restructure the physics program to better meet the needs of the physics students and to insure an efficient use of faculty while maintaining a high quality program. Phase I of the project (spring, 1973) focused on planning a restructured program which would maintain a core of courses taught in the traditional lecture format at the freshman and sophomore level and provide for a Personalized System of Instruction (PSI) in the upper level courses through self-paced learning packages. The bulk of the work during Phase I centered on preparation of these materials for four courses. Some of this self-paced instructional material was implemented ahead of schedule last year.

This year, the specific objectives of the project were:

A. Phase II (Fall, 1973)
   1. Identify viable interdisciplinary and/or career-oriented options.
   2. Prepare PSI materials for the remaining traditional, upper-level elective physics courses.

B. Phase III (Spring, 1974)
   1. Establish one or two interdisciplinary and/or career-oriented physics options.
   2. Prepare PSI materials where necessary for the new options.
   3. Publicize new programs.

Several factors were involved in the implementation of PSI materials. Each of the designated courses was broken into units, and different objectives and procedures for meeting objectives were outlined for each unit. Study guides and reading materials were made available to students to enable them to accomplish specified objectives. Faculty members also were available at various times to answer special questions. Students proceeded through the various units sequentially, on their own, with progress from unit to unit on a mastery basis (i.e., students were required to pass a test on one unit before being allowed to proceed to the next unit).

Extensive administrative difficulties were expected if students received an "Incomplete" for not completing all the units. Also, individual students, especially seniors with relatively inflexible schedules, might encounter problems in trying to make up incompletes. For this reason it was decided that students should receive a letter grade for the course. This grade would be based on the number of units completed during the semester and incompletes would be avoided if at all possible. It was not necessary for a student to complete all units in order to receive credit.

The purpose of identification and implementation of career-oriented and/or interdisciplinary options was to expand the overall physics program and to increase the vocational relevance of the department. It was anticipated that part or all of the courses within any proposed interdisciplinary or career-oriented option could be prepared within the PSI format.

Thus, the physics project for this year centered on two things--a Personalized System of Instruction and the career-oriented and interdisciplinary options. It was anticipated that the proposed expansion of the physics program could be achieved both efficiently and economically and that no additional faculty would be needed unless there was a substantial increase in the total physics enrollment.

EVALUATION/STATUS. During the spring 1974 semester, a total of eight, 300-level physics courses were offered in the PSI format: Astrophysics, Advanced Mechanics, Advanced Electricity and Magnetism, Atomic Physics, Methods of Mathematical Physics, Molecular and Solid State Physics, Physics and Computers, and Relativity. A total of 31 students enrolled for these courses, but there were six withdrawals during the semester, leaving 25 students who completed the courses.

In a questionnaire administered at the end of the course to 22 of the 25 enrolled students, response was generally favorable to PSI. Seventy-one percent of the students felt they spent more time studying in the PSI course than in conventional courses; 57% felt they had learned more, and 29% felt they had learned the same amount. Sixty-two percent enjoyed PSI more while 33% enjoyed it less. Overall, 60% felt PSI was better than traditional courses. Only half as many (30%) felt it was worse. Given a hypothetical choice of selecting PSI or the conventional lecture mode of instruction for a particular course, students favored the PSI mode nearly two to one. Sixty-five percent favored PSI and 35% favored the conventional mode. The only less than favorable student response concerning PSI was in terms of "getting it all together" (i.e., providing an overall grasp of the subject): 40% felt PSI was better, 45% felt PSI was worse than conventional classes.

Favorable student response was also discussed in a report submitted by Dr. Ken Ford, Massachusetts Institute of Technology, who was invited to the campus to evaluate the project. On the basis of conversations with students and a questionnaire he devised, Dr. Ford obtained results similar to those discussed above. He concluded that students had given a positive endorsement to the PSI format. In addition, Dr. Ford was pleased that ISU students, unlike many students in PSI courses elsewhere, did not complain of fragmentation or difficulties with self-motivation. Fourteen of the 17 he questioned found the PSI course as coherent as a traditional course, and 13 of 17 reported no major problem with self-discipline.

Several other elements of the project received favorable comments from Dr. Ford. He felt courses were well planned and organized and was favorably impressed with work the faculty had done in preparing PSI materials. It was his belief that study guides were clear and well done. They contained good, brief introductions, objectives that were well-stated, procedures correlated with objectives, and frequently useful supplementary discussions. An especially significant benefit of the project noted by Dr. Ford was the fact that, as far as he knows, it is the most extensive use of the PSI method in advanced physics courses ever attempted.

Since the PSI format at ISU has attained a good level of success, this indicates that the PSI format can be successfully used in advanced courses and with conceptually abstract subject matter. Also, the ISU development may become

exportable to other institutions facing similar circumstances in upper-level physics courses with low enrollment. With this in mind, Dr. Ford recommended that the ISU program be publicized in a physics teaching journal. Plans are currently underway within the department to accomplish this recommendation early next fall.

The only major reservation expressed by Dr. Ford was that the level of achievement required of students may have been, on the average, too high. He said it was not surprising for such elevated expectations to occur in the PSI materials, but suggested the learning objectives in a PSI unit be geared to what the average student can master. He stated that the students with whom he talked felt that lowering the minimum accomplishment required for the course was warranted. In this vein, Dr. Ford recommended that criteria for mastery (i.e., difficulty level) for each unit be lowered, and that completion of all required units should earn a B (or C) and not an A. Optional units could then be offered at the end of each unit, along with a final exam, and an A grade could be awarded for the completion of the optional units and/or an excellent performance on the final exam. In his opinion, such a revision would develop adequate competencies in the average student and provide the best students with higher levels of attainment through optional units.

In addition to these suggestions, Dr. Ford offered several others to "polish" the program. He suggested that a special room, set aside for student use, might stimulate more interaction among students in the PSI courses. He also felt that it would be desirable to gradually expand the range of learning resources beyond textbooks and tutors to include audiotapes and/or videotapes. Finally, Dr. Ford suggested that office hours for faculty-tutors be specifically designated (from 6 to 10 hours per week) and rigorously followed. This would actually increase availability of faculty members since students would be in a better position to know exactly when faculty-tutors could be reached.

Although the faculty was successfully involved in development and implementation of PSI courses, the second major objective of the project, i.e., the establishment of the career-oriented options was not accomplished due to the constraints of time and limited funding. As a result, the development of the overall physics program was not as extensive as originally planned. It is anticipated that continued department evaluation and study will determine if establishment of career-oriented options is a viable objective. If so, it is expected that even further analysis and effort by the department will develop ways to overcome obstacles impeding establishment and implementation of career-oriented options.

In summary, even though career-oriented options were not established, the project was successful in implementing upper-level physics courses in the PSI format. The PSI courses were well received by students; the majority felt they learned more through PSI and enjoyed it more than conventional courses. Most students chose PSI over a conventional lecture class when given the choice.

For the future, the Physics Department seems faced with several challenges: continued evaluation and revision of criteria for mastery of each unit; continued revision of PSI materials as a whole (i.e., the study guides and tests) to the point that they are judged sufficiently polished to be publicized and/or made exportable to other institutions facing similar situations; and continued study and eventual implementation, if appropriate, of career-oriented options. For the present, the faculty should be encouraged by the development of the project. As expressed by Dr. Ford: "For an effort of this magnitude carried out in one year, the overall quality is remarkably high."

Educational Psychology

Noel Gill, Pat Chesebro, William Gnagey, Barbara Goebel, Margaret Jorgensen, Charles Sherman, Dorothea Smith, and Margaret Waimon
Department of Psychology

DESCRIPTION. In the ISU Undergraduate Catalog, Educational Psychology is described as: "The application of psychology to education covering human learning in the school setting, evaluation and measurement of learning outcomes, developmental factors of learning, and social factors of learning." Educational Psychology is a requirement for all students seeking secondary school teacher certification, and thus traditionally has had large enrollments. Realizing this factor, the Educational Psychology course committee set forth these developmental objectives:

1. Incorporate appropriate instructional methods, based on learning theory, to assist students in mastering basic concepts and fundamental skills, and in developing higher order cognitive skills.
2. Provide an opportunity for undergraduate education students to participate and be involved in application of educational innovations which they are studying.
3. Incorporate a system of immediate and specific feedback of results.
4. Increase instructional flexibility to accommodate individual differences.
5. Provide for increased interaction among students and between students and faculty in higher order learning experiences.
6. Provide a more effective utilization of faculty resources through a coordinated team approach.

The course was divided into four semi-autonomous and non-sequential learning units: human learning in the school setting; developmental factors of learning; social factors of learning; and measurement and evaluation of learning outcomes. The initial stage of learning involved basic concepts and fundamental skills, which were prerequisite to the second stage of learning. The second stage involved activities designed to develop such higher order cognitive skills as integration, synthesis, application, and evaluation.

At the beginning of the course, students were given a handbook which listed learning objectives and readings required for each unit. During the first session of each unit, an introductory lecture was given to facilitate the acquisition of basic skills. Approximately one week after the introductory lecture, each student was given a mastery test based on the objectives stated in the handbook. Mastery was defined as achieving 80% correct on the 30-item objective test. To provide immediate feedback to students as well as to facilitate specific remedial help if needed, the tests were scored immediately. Students not achieving mastery on the first try were given a second try (and a third, if needed) within a few days.

Once students demonstrated mastery of the basic concepts for a unit, they were eligible to move on to the second stage of the unit--the Advanced Learning Project (ALP). Students chose and signed-up for an ALP from a list describing the objectives, procedures, and criteria for credit for each available ALP. Each faculty member conducted an ALP which he or she had developed according to his or her interests and competencies. The ALP's consisted usually of four to five sessions (one hour and fifteen minutes each) and students worked on their projects under the supervision of the ALP professor. To illustrate, the following are two examples of ALP's. The first was from the unit on "Social Factors of Learning."

Project Title: Learning Through Discussion Techniques
Objective: To examine non-traditional approaches to classroom instruction involving the use of small group discussion and skills.

Procedure: The project will consist of an introduction to small group learning techniques and training communication and personal interaction skills, practice in applying these methods in small discussion groups, opportunity to video tape and review group discussions.

Criteria for Credit: Because of the nature of the project attendance will be required for all group sessions. Students will apply the learning through discussion approach on a variety of topics and write up a report of these experiences.

The second example was from the unit on "Evaluation and Measurement."

Project Title: Non-Test Evaluation

Objective: Knowledge about check lists and rating scales usable for the evaluation of skills, products, and projects for students with majors in Art, Music, Physical Education, Industrial Technology, Agriculture, Home Economics, etc.

Procedure: Students will consult with teachers in their major field in order to find evaluation techniques suitable for their subject. They will use the instruments which they have found and will write a paper and/or give a presentation to the rest of the class.

Criteria for Credit: The written and/or oral presentation described above.

All grades were on a credit/no credit basis only. In order to receive credit, a student was required to exhibit mastery of basic concepts, and to achieve the criteria for the respective ALP for each of the four units. Students who did not complete all four units did not receive credit for the course, but they could reregister for the course in another semester and complete only the deficient units.

EVALUATION/STATUS. The evaluation of the project for the previous year compared student ratings of this course with more traditional instructional formats with specific emphasis on the formats of previous courses in educational psychology. Among other conclusions, this comparison indicated that students felt the project was a significant improvement over the instructional format used in previous educational psychology courses at ISU.

This year, the main method of evaluation was a report submitted by Dr. John Feldhusen of Purdue University, who visited the project on two separate days during the spring '74 semester. In his report, Dr. Feldhusen commented very favorably on several features of the project. He felt the rationale for the course was well conceived, and the course syllabus did an "extremely good job of presenting the theoretical model and the operational features" to the students. In addition, he mentioned several organizational advantages, such as students being able to select the ALP's in which they participate, students being able to repeat ALP's that are not passed, students being able to take more than one unit at a time, and the separation of stage one learning and mastery testing from the stage two ALP's. Also, he noted that the opening lecture for each unit, though difficult to give, could be of great value when well done (as was the case in the lecture he attended). He saw the ALP's as "three weeks of excellent classroom instruction," and praised the faculty teaching the course as "excellent, high quality, and dedicated." Finally, after talking with students, he perceived them as being enthusiastic about the course.

To provide future direction for the course, Dr. Feldhusen noted several areas which needed close examination by the project faculty. First was the element of rigidity. Reading assignments and time schedules were the same for each student,

with little apparent effort to match learning activities to student characteristics. Dr. Feldhusen also expressed a doubt that the readings always provided a knowledge base for the higher order cognitive activities that followed. Second was the possibility that the four content areas could be inappropriately weighted. Dr. Feldhusen proposed an alternative content-structure wherein the developmental and social units are compressed into one unit, and the learning unit is expanded into two units--one for learning processes, and another for learning outcomes. Third, the mastery tests needed to be reevaluated. Dr. Feldhusen expressed concern that the mastery exams were not of uniformly high quality, and there appeared to be no available alternative methods of evaluation (e.g., essays, oral quizzes, and projects), especially for those students who failed the mastery test the first time around. Finally, there was need for further evaluation of student achievement. Dr. Feldhusen suggested that a good study be designed and implemented next year to answer two questions--Are students learning anything of value? How much are they learning?

In conclusion, Dr. Feldhusen stated that "Psychology 215 is a well designed course of instruction. It is theoretically strong and operationally effective. The faculty teaching it are doing an excellent job, and they enjoy good leadership."

Evaluation of Educational Innovation

Ronald S. Halinski and David Wieck
Measurement and Evaluation Services

DESCRIPTION. This project was funded through the Educational Innovation Program (EIP) to provide for evaluation of the other ten projects funded under that program. The evaluation of each project was undertaken jointly by the project faculty and the staff of the Measurement and Evaluation Service.

Due to the diversity of objectives represented by these projects, no single evaluative process was sufficient in all cases. As a result, information was gathered through a variety of means and sources. In four projects: Humanities Education Theatre Company, Individualized Institutional Packages in Physics, Competency Based Instruction, and Educational Psychology, major emphasis was placed on the reports of off-campus evaluators. These evaluators were nationally recognized experts in their particular fields and were chosen from a list of recommendations submitted by each project faculty. In addition to the summative evaluation report on the projects, the off-campus evaluators were asked to work with faculty in charting the future direction of the projects.

Student and faculty feedback collected systematically through use of questionnaires was a second major source of evidence. Associated with this activity, services provided through this project included designing and producing the questionnaires, administering them in many cases, preparing the data for processing, and compiling statistical summary reports. Other evidence was provided through visitations and observations made by the Measurement and Evaluation Service staff, interviews with project staff, reviews of project proposals, reports, and University records, and a formalized experimental study comparing one method of instruction with another.

As an ancilliary activity, an institutional survey of student perceptions, attitudes, and expectations in relation to their educational experience at ISU was undertaken. Questions for the survey, which involved approximately 4,600 students, were taken from the Higher Education Measurement and Evaluation Kit prepared under the direction of C. Robert Pace at the Center for the Study of Evaluation, UCLA Graduate School. The primary purpose of the survey was to

provide a data-base which could be used in curricular planning and evaluation functions of the University. From this data-base, local norms were developed against which changes or differences in student opinion and perspective as a result of an EIP project could be measured. Data from the survey will be made available to the University community in a separate publication.

EVALUATION/STATUS. A final evaluative report was prepared for each EIP project, and copies were sent to the Dean of Undergraduate Instruction and the principal faculty member involved in each project. Thus, the evaluation undertaken by the project could be seen as serving two primary functions. It provided feedback for the ten projects which were funded and evaluated during the past year and it also provided input into the budget review process for future funding.

As a result of observations made throughout the year, this project proposes several recommendations to facilitate the process of evaluation in coming years. First, when considerable alterations in project objectives or processes are warranted by substantial changes in the budget allocation, it is suggested that a revised plan be submitted describing the adjustments which will be undertaken to keep it in line with the finalized allocation. In the past, such revisions have not been required with the result that some involved parties, including project staff and the staff of the Measurement and Evaluation Service, were not always fully aware of what the revised project was actually attempting to accomplish. Hopefully, the submission of a formal revised plan, based on the actual budgetary allocation, will facilitate communication and keep all principal parties accurately informed.

Secondly, it was observed that there appeared to be some benefits when some project personnel submitted (at their own discretion) a formal evaluation report at the end of the spring semester. Thus, it is suggested that this type of report be required of projects whenever it could be useful. However, given the amount of time necessary for organizing such a report, it is recommended that this activity be allowed for in the budget.

The third recommendation concerns continued use of off-campus evaluators. The process of selection which involved personnel from the project to be evaluated and from Measurement and Evaluation Service resulted in two important outcomes. The independence of the off-campus evaluator provided an impartial report. And inasmuch as he was professionally acceptable to the project faculty, this increased the likelihood that the faculty would be receptive to recommendations and suggestions made.

Since the evaluation function as coordinated and undertaken by this project was relatively new to the ISU campus, it is worthwhile to note that the collection of systematic evidence for the improvement of instruction appears to be gaining continued acceptance. Several projects which will not be formally funded through EIP next year have requested the continued involvement of this office in the evaluation function. In addition, several requests for assistance with evaluation have been generated through other channels because of this project's involvement in the evaluation of EIP projects.

Junior Semester Off-Campus

Robert Hemenway, Tom Caldwell, Everett Bauer, and Keith Stearns
Department of Special Education

DESCRIPTION. One of the difficulties encountered in training special education teachers is limited access to large numbers of exceptional children prior to the student teaching experience. To counteract this problem, an off-campus program was established in cooperation with the Special Education District of Lake County (SEDOL) during the 1972-73 academic year wherein teacher trainees spent a semester working under the direct supervision of the SEDOL teachers in classrooms with exceptional children.

The purpose of the project for the 1973-74 school year was further refinement of the curriculum and of the clinical experiences at SEDOL and establishment of a similar program in the Peoria School District.

In these programs each ISU student was assigned a minimum of 20 hours per week in the classroom, in addition to five hours of formal academic training under ISU faculty and school district professional personnel. The formal academic portion of the program was divided into seven modules intended to teach various professional skills needed by teachers and provide theoretical frameworks for conceptualizing and integrating the practical experiences of the classes. The seven modules included in the project were: Introduction; Curriculum materials and Media; Teaching Strategies; the Teacher as a Person (replaced in Peoria by Parental and Community Involvement); the Law and Special Education; Theory and Assessment (replaced in the spring '74 semester by Diagnosis and Remediation of Exceptional Children); and Evaluation. For the academic and field work combined, students were awarded 16 semester hours of credit. Following this experience, students were expected to complete all other on-campus curriculum requirements, including student teaching.

The academic content of the instructional modules designed for the project differed significantly from the academic content of courses offered on campus. The coursework generally offered to the special education students is organized according to the recognized domains of traditional academic disciplines. Courses in Mental Retardation, Behavior Disorders in Children, Education of the Mentally Retarded, and Education of the Neurologically Impaired are part of the traditional professional preparation of special education teachers. In the off-campus programs, courses were designed on the basis of an analysis of the daily activities of professional practitioners instead of selecting individual courses from those already offered on-campus and assembling them in a sequential program of studies. Academic specialists from ISU and practicing professionals in the field were called upon to design instructional modules which could be used to teach required professional skills and related information to students. The content focused on the characteristics and education of children with developmental disabilities. The one feature which the modules had in common was their relevance to the professional practice of teaching. This attempt at integration of educational theory in the modules and pedagogical practice in the classroom as well as strong reliance on the school district professional staff for both supervision and teaching were central thrusts of this project.

EVALUATION/STATUS. Students who participated in this program were majors in Mental Retardation (Educable and Trainable) and Maladjusted (Educationally Handicapped, Learning Disabled, and Behavior Disorders). Twenty-nine students were in Lake County during the fall '73 semester, and 25 students participated in

the program in the spring. The center at Peoria involved 21 students in the spring semester.

The reaction from all who were involved in the project, ISU students, ISU faculty, and Peoria and SEDOL staff, was overwhelmingly positive. At the end of each semester, all participants completed a formal evaluation questionnaire. On a continuum of one to four (1 = extremely practical; 4 = of little benefit), the average rating of the program by ISU faculty was 1.14; the rating of the Peoria and SEDOL administrative staff was 1.18. Eighty-one percent of the local teachers felt the project was either extremely helpful or very worthwhile for their personal and professional development. And 96% felt the project was extremely helpful or very worthwhile for the educational growth of the pupils in the classroom. The average rating of the ISU students was 1.04. Ninety-six percent said the overall value of the program was extremely practical, and the remaining 4% felt it had good application. As a result of the project, ISU students felt that they developed educationally. Eighty-nine percent said the project was extremely helpful for their educational growth, and an additional 9% felt it was very worthwhile, but should be strengthened. In addition, several students noted, in an evaluation session that was taped at the end of the project, that it was a very integrative experience for them. Many felt it had enabled them to understand the process of teaching in a practical sense, whereas previously it had been only at a theoretical level of understanding. As one student mentioned, "The whole thing finally falls into place . . . We've had all these courses and it's still distant and now we know so much more and we're more confident." Following in this vein, several other students felt their self-confidence and assurance in the special education classes had improved markedly.

On the evaluation questionnaire, 98% said the project was extremely practical or had good application because they learned basic skills in developing curriculum as well as other procedures for the classroom management of exceptional children. As a result of learning these skills, they felt more prepared for their future experience in student teaching. While they were previously fearful of the student teaching situation, many now indicated they were looking forward to it.

A parallel benefit of the project related to vocational decisions. Ninety-two percent of the students felt the project was extremely practical and 4% felt it had good application since, as a result of the project, they learned to use more realistic criteria in their personal decision regarding special education teaching as their chosen vocation. Still another benefit of the project for many of the students was the opportunity to become familiar with the teacher's role and to observe teachers interacting with the administration and their professional colleagues as well as their students.

Despite the pervasive enthusiasm and satisfaction manifested, there were several concerns that did emerge which may require attention. Since the spring semester was the first time the project was in operation in Peoria, there was the expected modicum of confusion regarding the roles and mutual responsibilities of the ISU students and their supervising teachers. Several students remarked that their teachers were not familiar with the modules and therefore could not relate the content of the modules to the experiences in the classroom. Others felt they were not receiving sufficient feedback on their performance. There was a strong suggestion that the students be formally evaluated early in the semester in addition to the evaluation at the end of the project. This would provide specific information in order that necessary corrective action could be taken at the appropriate time. This same suggestion received support in a similar discussion with the

Peoria teachers.

Two questions of policy were raised in both SEDOL and Peoria. The first was whether the student could change classrooms after nine weeks or be required to remain in the same class throughout the entire 18 weeks under the present policy. Reaction among the ISU students on this point was mixed with advantages of breadth versus in-depth experiences cited. Some felt they would have appreciated changing after nine weeks so they could observe more teaching techniques and have the opportunity to work with more special education students. Others felt that staying in the same classroom was better because they then would be able to develop greater understanding of the same students and be able to test the effect personally of different teaching techniques. A compromise suggestion made by the students was that more visits to different classrooms during the semester be encouraged and perhaps required. The second question of policy was concerned with whether the ISU students should be placed in a special education class in their major area or in a non-major class. Many felt they would be more prepared for a class in their major area and the experience would be more advantageous to them since they could learn more about teaching materials and techniques that they would eventually be using. Others, however, appreciated the opportunity to broaden their experience and recognized the adaptiveness of many teaching techniques. Since these two questions of policy were raised in the evaluation discussion with each of the four groups placed at SEDOL and the one in Peoria, it appears that the issues are sufficiently important to some students as to detract from the quality of the experience.

On the basis of the response from students, faculty, and school district personnel, the project was highly successful. However, to further enhance the future development of the project, continued evaluation and study of several elements of the project appear warranted. These elements are the model for school district teacher involvement in the academic portion of the project, the format and timing of school district teachers' evaluations of ISU students, and scheduling policies regarding length and area (major or non-major) of classroom placement.

Individualized Instruction and Preprofessional Training in Composition

Steven Kagle and John Heissler
Department of English

DESCRIPTION. Realizing that skill in writing is essential for academic success, the English Department attempted to strengthen its introductory composition program. Last year, the individualized instruction sections of Introductory Composition incorporated two features: tutorial assistance was provided for those students needing it; and the opportunity to do advanced work for additional credit was available for those students who reached proficiency during the first eight weeks of the course. The focus of the project for this year was an attempt to determine whether a proficiency-type course or a regular 18-week graded course would be the most beneficial in developing freshman writing skills.

Students were free to enroll in one of two types of introductory composition courses: either an 18-week graded section, or a "proficiency" section. The graded section was in a more traditional format, but the proficiency sections, similar to last year's proficiency program, included several non-traditional aspects. First was the provision that qualified students who exhibited sufficient abilities in composition could proficiency out of the course with full credit after the first nine weeks.

This "freed" these proficiencied students to enroll in one of three experimental courses for the final nine weeks. These three courses were a University Studies seminar on a selected topic in literature, Advanced Expository Writing, or Introductory Creative Writing. Each of these courses was given for an additional two-hours credit. Secondly, those students who did not reach proficiency at the end of the first nine weeks, and who were identified as needing special help, were provided with closely supervised tutorial assistance on a small group or individual basis. The tutoring was done by teams of Undergraduate Teaching Assistants (UTA's) who were teacher education majors in English or Composition, and who were concomitantly enrolled in an experimental English seminar on "Problems in Teaching of Composition."

During the second nine weeks while UTA's were working to develop writing skills in those freshmen having difficulties, regular teachers worked with the more advanced in the experimental courses. Thus, the proficiency portion of the project was designed to directly benefit three target populations: by providing tutorial assistance for those freshmen who were having difficulty in writing, by extending the possibility for advanced work and credit to those freshmen who had exhibited advanced potential in writing, and by providing upperclassmen who were prospective secondary school teachers in English a chance to teach and tutor. The basic value of the proficiency sections was seen as providing an individualized instructional program for students with differing individual needs.

The specific objectives for the project were:

1. Improve writing competence of undergraduate students
2. Facilitate and improve the effectiveness of the proficiency tract in composition
3. Improve the teaching skills and employability of undergraduate (and if possible, graduate) students preparing for teaching careers in English.
4. Provide a more personalized and flexible approach to student writing problems
5. Facilitate the offering of experimental courses (189.04-.06) to continue the development of language related skills for students who are able to reach the level of guidelines set for the 101 course by the end of the first half of the semester.

EVALUATION/STATUS. During the fall semester '73 there were approximately 1000 students enrolled in the proficiency sections. Of these, about 450 students achieved proficiency at nine weeks and about 225 of them chose to enroll in a 189 enrichment section for the final nine weeks. Out of approximately 550 students enrolled in proficiency sections for the spring semester '74, about 250 proficiencied at nine weeks, and 150 of these enrolled in 189 level courses. Thus, for the entire year, about 45% of the students in proficiency sections achieved proficiency at nine weeks, and about 53% of proficiencied students enrolled in a 189 enrichment section.

During the fall '73 term, an experiment was conducted to compare English 101 classes (proficiency sections) with English 101.02 classes (graded 18-week sections). It was hypothesized by the English Department that students in the proficiency sections would be motivated to reach a proficiency level sooner than students in the 18-week graded sections, and also that students in the 18-week section, because of the greater amount of time spent in class, would in the long run develop a greater quality of writing skill than the proficiency section students. One of the basic goals of the experiment was to determine if either of the two actually occurred. Thirty-four sections of Introductory Composition were paired, based on the experience and teaching style of the instructor and five students were randomly selected from each section. This re-

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sulted in a total of 85 students within each of the two instructional formats, or a total of 170 students being compared. In all, three in-class themes from each student were compared, each theme being read by two faculty readers. The themes were scored on a scale from 1 to 6: ratings of 1, 2, or 3 indicating proficiency, and ratings of 4, 5, or 6 indicating non-proficiency. Criteria for evaluating the themes were established by the Freshman Writing Committee of the English Department. The selected in-class themes consisted of papers written during the first week of the course, the eighth week, and the final theme within the class. For the sake of comparison, the proficiency section for the final theme was composed of two groups. The first group was those students who did not reach proficiency at the end of nine weeks and who therefore remained in the proficiency section until achieving proficiency. The second group was those students who did reach proficiency at nine weeks and enrolled in a 189 level course and for whom the eighth week theme was also considered the "final" theme. In order to maintain student anonymity, and eliminate potential reader bias, students' names were not attached to their papers. Instead, a rigid system of student coding was established, and only one person (a non-scorer) knew the key to the code. Topics for the first and eighth week themes were decided on by the course committee. To avoid possible confounding of the experiment, the groups were randomly split in half (half wrote on topic A during the first week, and topic B during the 8th, while the other half did the reverse). The topic for the final in-class theme was selected by the individual instructors within each section. For the purpose of data analysis, the score used for each paper was the mean of the assigned ratings. The raters met in a group beforehand in order to achieve some consistency in rating. This procedure yielded reliabilities of .66 and .56 respectively for the readings of the papers in the first and second parts of the experiment. The comparative results for the graded 18-week sections and the proficiency sections were:

	Graded 18-week (N=85)		Proficiency (N=85)		
	Mean Rating	Std. Dev.	Mean Rating	Std. Dev.	t
1st week theme	4.2	1.0	4.0	1.1	1.42
8th week theme	4.0	1.0	3.9	1.1	.49
last paper graded	3.8	1.0	3.5	0.9	2.04*

*The difference in means (3.8-3.5=.3) could occur by chance alone less than 5 times in 100.

For the proficiency sections the results for the last paper graded (i.e., mean=3.5), are derived from three groups which can be further sub-divided as follows:

	Proficiency groups--last theme		
Group	Number of Students	Mean Rating	Std. Dev.
Proficiency at 8 weeks (no third theme)	33	3.6	0.9
189 sections	12	3.8	1.0
No proficiency at 8 weeks (last in-class theme)	40	3.3	0.9

An interesting and unexpected result is the fact that the last in-class themes for proficiency-section students who did not reach proficiency at eight weeks received the best ratings 3.3 Moreover, the mean rating was significantly lower (in a statistical sense) than the mean rating for the last theme in the 18-week section. Given the difference, it must be remembered that for those students still in the proficiency sections during the final nine weeks, there was a strong emphasis on individual help

through group and/or individual tutoring, and this may have accounted for the significantly better ratings for the last theme.

The results of the experiment did not support either major hypothesis; however, the English Department engaged in extensive discussion and debate regarding the interpretation of the results. A compromise solution regarding next year's course format was reached. It included aspects of both models used in the experiment. All sections will be 18-week graded sections, with each student required to write at least 10 papers in order to receive credit, but instructors will be encouraged to use individualized teaching approaches whenever possible. Also, the UTA's will continue to be used, and each will be assigned to two instructors. Under very close supervision by the assigned instructors, UTA's may occasionally be allowed to teach the entire class and may also be allowed the opportunities for tutoring and teaching small groups. After nine weeks or so of experience in the course, UTA's will also be permitted to mark, but not grade, some papers. Also, if knowledgeable, they will be allowed to conduct library tours and help verify documentation on library papers.

A significant side benefit of the project was the role it played in focusing the attention of the faculty on important issues of instruction in this first writing course. The efforts of the "Summer Committee to Study the Freshman Writing Program" and the "Freshman Writing Committee" in designing and carrying out the experiment should serve as a model for other departments that wish to pursue serious evaluation of their instruction. For the coming year the challenge to the department is to maintain this strong focus on studying the complexities of instruction in the freshman writing course. In particular, the question of whether or not the individualized teaching techniques, shown to be effective in the proficiency sections, can be successfully implemented in the 18-week graded sections remains to be answered.

Professional Sequence Development Project

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Department of Curriculum and Instruction

DESCRIPTION. Over the past several years the Department of Curriculum and Instruction has continually attempted to improve the quality of instruction for prospective secondary teachers enrolled in the Professional Sequence (PS). The instructional format for PS has been based on the concept of competency-based instruction and has been organized around self-paced instructional packages. The PS staff identified the task-competencies which were to be achieved by the students in the program; developed and provided the students with a range of multi-sensory and self-paced learning materials, such as readings, audiotapes and videotapes, which would facilitate the acquisition of the competencies; and established objective tests and criteria to measure if the competencies were in fact attained. Where mastery was not demonstrated, the students were given additional learning experiences and opportunities to exhibit competency. Thus, the overall goal of the program has been to help students acquire a set of competencies and at the same time enable them to set their own learning rates and utilize their own learning styles.

Despite these efforts, general student response to PS was somewhat less than favorable. In a survey conducted last year, 51% of the students had an unfavorable attitude toward PS. Among other things, students specifically indicated difficulty with the self-pacing element of PS--46% found it difficult to set their own learning pace while 42% did not. Forty-four percent expressed a preference for more structure, for example, deadlines for assignments and completion of

packages. Also related was the finding that 53% would have preferred some seminars or small group discussions. An additional criticism of the program, voiced by several of the faculty, was the fact that PS was too restricted, offering no alternatives to the self-paced instructional packages.

In response to these student and faculty criticisms, the PS staff decided to further revise the PS program. In addition to providing for continued refinement of self-paced instructional materials, efforts this year included a significant new dimension--the mini-course. The mini-course was to be a "short course" offered for varying units and meeting for various lengths of time. Each mini-course was to concentrate on one of three areas: existing objectives in the Professional Sequence; classroom teaching skills; or specialized skills in curriculum study, methodology, simulated teaching or reading.

For each area of concentration, it was anticipated that the mini-course would serve three purposes. First, it would provide more traditional formalized instruction for those students who feel a need for the security that structured, formal classes offer. Next, it would maximize learning potential for those objectives related to higher cognitive development which would be facilitated by student-teaching interaction. Finally, it would involve the acquisition of skills in interacting which are necessary for teachers since they must respond to various unplanned situations that arise from day to day. In essence, mini-courses were seen as a supplement and alternative to the self-paced learning packages, a response to student and faculty preferences, and a method for acquisition of certain higher-level cognitive and personal skills by prospective secondary teachers.

The specific objectives for this phase of Professional Sequence development were:

1. Identification of existing and new instructional packages that require development of mini-courses to maximize higher level cognitive learning through student-teacher interaction.
2. Identification of existing and new instructional packages that require development of mini-courses to maximize the acquisition and application of fundamental teaching skills.
3. Preparation and implementation of mini-courses for existing and new instructional packages for higher level cognitive learning through expanded teacher-student interaction.
4. Preparation and implementation of mini-courses for existing and new instructional packages for acquisition and application of fundamental teaching skills.
5. Development and field-testing of procedures and instrumentation for evaluation/newly-developed mini-courses.

EVALUATION/STATUS. During the spring 1974 semester, a total of 29 mini-courses were offered (16 in the first half of the semester and 13 in the second half). The first area of concentration, covering objectives already existing in the Professional Sequence, consisted of 11 different mini-courses, five of which were offered twice. An example of a mini-course from this area is:

Title: Taxonomies of Instructional Objectives
Merits: 15
Description: This mini-course is designed to provide you with information and skills related to understanding and writing cognitive, affective, and psychomotor objectives. The ability of the teacher to specify the precise behavior he or she wishes the

student to acquire in the cognitive, affective, and psychomotor domains is vital to the teaching-learning process. Additional titles of mini-courses in this area included Precise Instructional Objectives; Analysis of Teaching; Teaching, Ethics, and Professionalism; Obtaining a Teaching Job; School Law Principles for Teachers; the Handicapped Reader in the Classroom--Identification and Treatment; the Evaluation of Learning Potential in Relation to Reading Performance; Developing Proficiency in the Use of Oral Reading Tests; Informal Diagnosis of Students' Reading Abilities in Content Classrooms; Technical Vocabulary and Language Development in Content Classrooms; and Comprehension in Content Classrooms.

The second area of concentration on classroom teaching skills, consisted of five different mini-courses. One mini-course from this second area is:

Title: Organizing for Individualized Instruction
Merits: 10
Description: This mini-course is designed to provide you with experiences related to organizing the classroom to implement different techniques of individualizing instruction.

Additional titles of mini-courses in area two included: Discipline in the Classroom; Professional Sequence Supervised Experience in Tutoring; Games and Simulation Games in the Classroom; and Presenting Reading Instruction in Business Subjects.

Finally, the third area, focusing on advanced and specialized skills related to teaching, consisted of eight mini-courses. A description of a mini-course from this category is:

Title: How to Use Computers in Education
Merits: 8
Description: This mini-course is designed to increase your understanding of computer utilizations in education and to provide you with at least three different opportunities to experience the use of computers in the teaching-learning process.

Additional titles of mini-courses in this category included: Using the GMI to Continuously Improve as a Teacher; Educational Futuristics; Orientation to Simulated Teaching; What Makes a Computer Tick and Buzz and Hum?; Black/White Cultural Differences; Curriculum Planning and Goals: Illinois in the 1970's; and Get a Job.

The response of both students and faculty in the mini-courses was very favorable. Student response was indicated in evaluation forms completed by 180 students during the spring 1974 semester. Ninety-nine percent responded they were satisfied with their overall experience in the course. One hundred percent recommended the continuation of the mini-courses, and 98% felt they would like to see additional Sequence material taught through a mini-course structure. The faculty expressed equally favorable opinions about the mini-courses. Out of seven faculty surveyed, all seven felt the mini-courses should occupy a permanent place in Professional Sequence, and all seven said they would like to teach other mini-courses in the future.

Students and faculty were also encouraged to write open-ended comments. These served as a further indication of the degree of favorable response, since out of the approximately 50 student responses, there were no comments that could be termed negative. In addition, the comments pointed out specific conditions which were most appreciated about the mini-courses. The most often stated benefit was the mini-courses allowed for exchanging of viewpoints through student and faculty interaction and discussion. Among other things, the faculty

remarked that students seemed interested in mini-courses, specifically because of the opportunity for interaction, and that there seemed to be a demonstrated need for teachers to have skills in areas covered by the mini-courses. Many students remarked that the interactions not only increased their interest in the material, but also enabled them to learn more information and retain more of what they had learned. In addition, many students appreciated the fact that they could obtain immediate feedback and assistance from the faculty teaching the course. This in turn provided many with a better sense of their strengths and weaknesses relative to the objectives in the particular package on which they were working.

While student response to the mini-courses was overwhelmingly positive, the range of mini-courses that were offered was perhaps too small, and therefore excluded a fairly large percentage of Professional Sequence students. In a survey of over 500 Professional Sequence students, 23% felt they were able to find something of interest in the range of mini-courses offered, while 18% were unable to find anything of interest, and the remaining 59% had no opinion. In this vein, several students suggested that the mini-courses be extended to include as much of the Sequence material as possible. Several other students, and even a faculty member, suggested that the mini-courses be offered at several different times, especially at night, so that a larger percentage of Professional Sequence students would have the opportunity to become involved.

In summary, the inclusion this year of mini-courses in the Professional Sequence Development Project met with very favorable response. The mini-courses were both well-received by students and supported by faculty. Moreover, the mini-courses highlighted the value of interaction between and among students and faculty, and pointed out that perhaps this degree of interaction cannot be attained in self-paced instructional packages. The challenge to Professional Sequence for the future with respect to the mini-courses seems twofold. First, ways must be developed to evaluate whether in addition to the already demonstrated increase in student interest, the mini-courses resulted in increased cognitive development and understanding. Also, ways must be developed to extend the mini-courses, both in terms of the content covered (where appropriate), and the times they are offered. Finally, it should be noted that the mini-course development is an additional innovation in an already innovative program of instruction. This illustrates the notion that innovative programs need to undergo continual evaluation; and when evidence indicates the necessity, they must be revised.

Competency-Based Instruction

Franzie Loepp, Larry Miller, Joe Talkington, Claude Bell, John Johnston, Jacqueline Karch, Charlotte Upton, Rick Cantrell, Roger Herberts, Larry Quane, and Gary Weede
Department of Home Economics and Industrial Technology

DESCRIPTION: Shortly after the departments of Home Economics and Industrial Technology were combined in 1972, an intradepartmental project was initiated to effect curriculum change. Phase I of the Competency-Based Instruction (CBI) project (1972-1973) was devoted to research and development of alternative pre-service professional courses offered by the department. The major accomplishment of this phase was a proposal for restructuring 14 courses into 6. One of these proposed courses, "Competencies for Teachers," was initiated in the summer of '73 to replace three previously offered courses--HE 244, IT 201, and IT 305.

The objectives for Phase II were:

1. Continued appraisal of local and national developments in competency-based instruction.
2. Provision for maximum faculty involvement.
3. Evaluation and revision of the experimental course "Competencies for Teachers."
4. Identification and development of technical competencies in the HEIT department.
5. Conceptualization of identified technical competencies into a hierarchical model.
6. Development of criterion reference for advancement.
7. Proposal of a format for filing for a course based on the concept of competency-based instruction.
8. Encouragement of the establishment of an advisory committee for the department and utilization of its membership in the advice and consent of project activities.

In addition, it was expected that several valuable by-products of the CBI project would evolve: improve faculty morale and curriculum development skills; further the reorganization of the HEIT department; and assure a logical, coordinated, and high quality program of undergraduate instruction.

As the primary means for effecting identification of technical competencies, the entire HEIT faculty was organized into seven teams covering the areas of Food and Nutrition, Family Living, Clothing and Textiles, Materials and Processes, Energy and Power, Graphic Communications, and Traffic and Safety. The responsibility of each of the teams during Phase II was analysis and evaluation of the competencies in their respective areas, so that each technical area might be organized into a functional, hierarchical model.

EVALUATION/STATUS: During the fall semester the work of each of the teams centered on compiling a list of competency components which the team felt should be attained by students in the core course in their particular area. During the spring, a competency verification survey was conducted in order to determine whether the identified competencies within each of the technical areas were really necessary for later occupational performance and success. This entailed sending a list of competencies to designated respondents in the field. These respondents were asked to indicate (on a four-point scale) how often they performed the listed task-competencies, and how much importance they attached to each task. Most of the respondents for the competency verification study were chosen from a list of recent HEIT graduates. (This list, totaling 925 graduates, categorized according to their employment situation, was assembled by the HEIT department during the fall semester 73 as a part of a system of graduate follow-up. This would make it possible for the department to obtain from former students various sorts of information that could be used by the department in making systematic changes.) Additional respondents to the survey included currently enrolled students, faculty members, and experts from business and industry. After the data was received, it was tabulated, summarized and reviewed by each team, and then considered as an important source of input for revising and developing competencies for the core course being taught in each team's content area.

The reaction of HEIT faculty to the concept of CBI was solicited through a faculty survey. Thirty-eight questionnaires were sent out to full-time faculty, and 29 (76%) were returned. In general, faculty members indicated support for CBI, although a sizeable number were undecided about several items. Seventy-four percent indicated support for (agree and strongly agree) the goals of the CBI

project as they understood it and 11% were undecided. While 35% agreed, 25% disagreed with the statement that the CBI approach would produce more competent teachers. Fifty-one percent favored a shift to competency-based teacher education courses in HEIT (17% did not); and 64% favored, while the remaining 36% were undecided about expanding the CBI endeavors of the department to include the technical areas. Forty-two percent agreed that they would like to work in a CBI system, but 20% said they would not. Concerning the seven-team structure, 48% felt that it should and 31% felt that it should not be utilized in future curriculum development activities.

For additional evaluation of the project, Dr. Robert Worthington of Rutgers University was invited to visit the project and submit a report. In general, his remarks were favorable to the project, which he felt was in line with the national trend in competency-based instruction. It was his impression that both faculty and students had positive feelings about the project, and that significant change had already been generated in the department, since "virtually every member of the departmental faculty has looked critically at the goals and objectives of his particular teaching assignment and attempted to restate them in more objective and measurable terms."

But Dr. Worthington expressed concern about project funding. He felt that the project was inadequately financed. Because of this, four additional courses originally planned were not implemented.

Dr. Worthington concluded his report with several recommendations. He suggested that student follow-up be continued as the ultimate test of the efficiency of competency-based instruction, that CBI be further tested in the technical areas, that an advisory council be established, that the professional courses in HEIT continue to be evaluated until overlapping is eliminated, that a study be conducted for evaluation of entrance competencies of transfer students, that CBI be considered for the graduate level, and that feedback to students be improved, particularly with respect to student evaluations of instruction. Finally, Dr. Worthington concluded that the CBI project be continued since termination of "the project at the end of the current academic year would be wasteful and counter-productive."

In summary, the CBI project of the HEIT department, especially through its department-wide evaluation of professional and technical competencies, was committed to developing in its graduates those technical and professional competencies necessary for vocational success. The project did not receive all the funding requested and consequently objectives for Phase II were revised to be more in line with the allocated budget. However, as was specified in an evaluation report submitted by the HEIT department, the project seems to have attained all the revised objectives. In addition, student and faculty response generally seemed favorable and the majority of the faculty seemed willing to support CBI in both the professional and technical areas of HEIT.

Music Education CORE

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Department of Music

DESCRIPTION. Desiring to keep up with the trend toward competency-based instruction and also upgrade the music education program at ISU, professors in the field of music education began last year to analyze the Music Education curriculum As a result of Phase I of the project, the department concluded that the sequence of preparation for prospective music teachers was fragmented into too many aspects

of the teaching task. Concomitantly, a new Music Education Core curriculum was proposed to replace the existing sequence. It was the intent during Phase II to implement the proposed curriculum. Consistent with this objective, Phase II activities were directed to three different components.

First, the Music Education Core, offered for 7-8 hours of total credit, was designed as a two-semester sequential course for juniors. It replaced three to four previously required courses. Conceptualized as a lab experience, the music core was scheduled for two hours daily (8 a.m. to 10 a.m.) in order to maximize flexibility, but it was anticipated that students would not be required to meet formally for more than 6 to 8 hours per week. The content of the core emphasized philosophy of education, theories of learning and development, and specialized music skills, all as applied to the teaching of music in the public schools. Learning activities that were planned for core students included large group meetings for lectures and demonstrations, small group meetings for special topics and group projects, and self-paced activities. Moreover, four sections of the core were delineated for the purpose of grouping students with special teaching interests--general, choral, band and orchestral.

Concurrent with the two-semester core course, students were expected to make parallel enrollments in Educational Psychology, Professional Sequence, Music History, Ensemble, or Applied Music. The purpose of this component was to make the overall objectives of the music education program more meaningful and cohesive for the students, by providing an atmosphere that would insure a sound and integrated understanding of all aspects of the music teacher's role.

To better consolidate the theory of music education with practice, the third component proposed that music labs be established at both Metcalf and University High. The labs were expected to provide music learning that would be individualized according to student interests and capabilities. They were seen as providing music education students with both needed experiences in teaching situations along the lines of the "open classroom" and opportunities for developing their own alternative ideas for music education. Within the music lab both the students as teachers and students as learners could become involved in the total music process--composing, performing, conducting, listening, sharing, and reacting to music.

Thus, it was the goal of the music education program to train highly competent music teachers by providing the student-trainees with a variety of learning experiences in an atmosphere conducive to an integrated understanding and practice of the music teacher's role.

EVALUATION/STATUS. For the purpose of evaluation, student and faculty questionnaires, containing both multiple-choice and open-ended questions, were developed by the core faculty and completed by several students and music faculty. Also, three of the Music Education Core faculty, including the director, submitted evaluation reports at the end of the spring '74 semester. Both positive and negative aspects of the project were pointed out by these various sources of evidence.

Since all scheduling problems were not solved, only a partial core was implemented. Traditional scheduled classes were continued, and not replaced by a single "core" course, but were supplemented by a number of large group experiences. This was facilitated by the two-hour block of time (8-10 daily) which was originally set aside by the Music Department for the Music Education Core. The large group experiences consisted of guest lecture-demonstrations and discussions on various topics. These topics included individualized and small group music instruction, the preparation of individualized learning packets, the use of audio-visual materials for instruction, and discussion of the student teaching experience (with partici-

pation by recent or current student teachers). Other large group sessions focused on actual performance. That is, improvisation, reading and conducting sessions with choral and instructional literature.

Student opinion of the core meetings, as determined from a music education student survey conducted at the end of the fall semester '73, was generally quite favorable. Several students mentioned that the core meetings were both interesting and beneficial. This was especially true of the core meeting that involved a panel of student teachers discussing their experiences. Others mentioned that the core meetings did help to unify the music classes, and a considerable majority suggested that there be even more guest lectures and demonstrations scheduled. Faculty members were also generally pleased with the core meetings and felt they gave students an opportunity to hear and work with experts in the field.

A second major accomplishment was the establishment of the music laboratory at Metcalf School. Attendance by Metcalf students in the lab was voluntary, and students came both individually and as a part of small groups from various Metcalf music classes that participated in the lab. As a conservative estimate, approximately 1400 Metcalf students used the lab from mid-November to mid-May. ISU Music Education students were involved in the lab at all levels of operation, ranging from supervision to development of learning packets to work with and observation of Metcalf students on an individual or group basis. The response of Music Education students to the lab was favorable, as most felt it was beneficial in exposing them to a new individualized approach to music education. One student remarked that it gave him "the opportunity to 'get my feet wet' before a small group of students before student teaching. It's great." As a side benefit, the Metcalf music lab served as a model for an important trend in the State. Throughout the year, over 80 classroom and college music educators came to visit the facility.

An additional but less tangible accomplishment of the project was in the area of faculty communication, especially among the core faculty teaching the course. In previous years these faculty members were involved in separate areas of specialization, but this year they were engaged in a collective effort. Several students were favorably impressed with the enthusiasm and attitude of the core team. One student mentioned that he was "surprised to see how three teachers can get along so well after all this."

Finally, music faculty support of the core was obtained. The majority of music faculty members surveyed in January '74 expressed approval of the core approach. Although 65% felt the core should be altered, 45% favored a more complete core approach and 25% favored the present modified core. The remaining 30% favored a revision of the previous curriculum without the core approach.

Because the core approach was only partially implemented, several undesirable ramifications resulted. First, the core was less integrative in nature than originally planned. In light of this, several students suggested a need for more integration of the core classes. Second, since the traditional courses had to be maintained, there was only a limited change in the types of activities which actually occurred within the core schedule. While large group lectures and efforts to bring experts to campus were accomplished, there was not sufficient flexibility to allow for small group projects as originally planned. Also, several students resented the fact that the large core meetings, which involved extra hours and extra work, did not result in extra credit. This, coupled with the early (8 a.m.) meeting time, held down the attendance for the core meetings.

In addition to the core being only partially implemented, the music labs were only partially implemented. Although the Metcalf lab was started, the lab at University High was not initiated as planned. As a result, the lab experience was limited to pupils of elementary and junior high school levels. Although most Music

Education students felt the lab was a very valuable experience, the number of Music Education students that could be involved was necessarily limited.

At the end of the project, a faculty report was submitted by Dr. Eunice Meske, who had been involved with the project for two years as both a visiting professor and a consultant. Dr. Meske was invited to the campus to assist in development of the project because she is recognized as an authority in the areas of competency-based and individualized teacher instruction in the field of music. In addition to presenting a brief history of her involvement with the project and commenting on the achievements of the project as outlined above, Dr. Meske offered several observations concerning continuing problems and reasons for limited success. First, she noted that the Music Education faculty perceived little real support for the project from certain elements of the administrative structure of the University, and found it difficult to identify lines of authority. Dr. Meske observed that the core faculty were perhaps over-extended. After performing several necessary day-to-day activities, the core faculty found little reserve time or energy to even meet together, let alone devote their energies to innovative planning or implementation. Thus, she offered the recommendation that the faculty load credit should be refigured and one or two additional music faculty should be hired. In her conclusion, which was based primarily on the accomplishments of the project as noted above, Dr. Meske stated that the first year of the core was "remarkably successful considering the problems," and added that she foresaw "tremendous possibilities for the core at ISU."

Humanities Education Theatre Company (HETC)

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DESCRIPTION. The Humanities Education Theatre Company (HETC) was a continuation of a project initiated last year. The primary purpose of this project was to supplement various humanities classes through in-class dramatic performances and video-tapes. Besides enlivening and enhancing humanities education, there were several other objectives:

1. To learn how to maximize the educational effectiveness of the company.
2. To develop the first stages of a handbook on the use of performers in the classroom.
3. To determine the appropriate company balance between professional and graduate performers.
4. To increase the number of video-tapes that are especially prepared for showing by the faculty.
5. To learn more about the appropriate liaison relationship between company and faculty in designing performance projects.
6. To explore more fully and intensively the educational potential of such a company in our University.

The staff for HETC consisted of one director, and six graduate theatre students. Last year the company consisted of professional actors, but due to budget constraints, this year it was decided, after departmental discussions had concluded that the educational effectiveness of the company would not be impaired, to use only graduate students. It was also decided to develop a repertoire of material that could be used in more than one class from one semester to another.

The company primarily performed scenes from plays, other material was also done. This included essays, poems, and fictional prose. Several different depart-

ments and groups throughout the University community used the services of HETC during the fall semester. A total of 81 performances were presented. These included English (22 performances); Theatre (22 performances); History 7 performances); Physical Education (5 performances); Process Theatre (5 performances); Music (4 performances); Information Sciences (4 performances); Political Science (3 performances); Metcalf School (2 performances); Dormitory Council (2 performances); and Art, Chicano Studies, Philosophy, Russian Literature, and the Wesley Foundation (one performance each). Information is not yet available for the spring '74 semester, but it is expected the data will reflect a similar performance schedule.

In addition to the performances, the players often remained in the class to participate in discussions of the material. This was contingent upon the time left as well as the discretion of the various professors. Another emphasis of HETC was close coordination with the faculty members who requested the performances. This was to insure that the selections and the company's presentations were in touch with the educational needs and objectives of the class.

EVALUATION/STATUS. As in the first year of HETC, Bernard Rosenblatt was invited to visit the project and submit an evaluation report. Following is a condensation of his report.

The intent of this year's assessment was to determine the emotional impact of HETC, the quality of learning taking place, and to make recommendations for subsequent development.

All of the projects objectives were accomplished except for #2 and #3. Objective #2 (development of the first stages of a handbook on the use of performers in the classroom) was delayed because of the amount of work, but this should be a central issue in HETC next year. Since only graduate students were used, objective #3 (determining appropriate balance between professional and graduate student performers) did not apply. However, since there was so little apparent difference in performances between last year's professionals and this year's graduate students, it seems that HETC can function equally well under either arrangement.

Classroom observations of HETC revealed several things. Students were generally attentive to the performance and many participated in discussions that often followed performances. But the faculty apparently spent little time providing an appropriate context for the performance. There seemed to be a lack of focus in the discussions that followed; however, when professors did stimulate specific questions, students responded more freely. An additional factor relating to the success of the discussion was the degree of preparedness of the actors and their ability to verbally communicate with the class during the discussions.

Students and faculty completed short evaluation forms within two class periods of each performance. As determined from the more than 3000 student forms that were completed, student response was overwhelmingly positive. Ninety-seven percent indicated they enjoyed the performance; 93% thought the performance was a valuable educational experience for them; 98% agreed the performance related to what they were studying; 87% indicated that the performance helped them develop new insights into their work in the course; 88% thought the performance made it easier for them to relate to work in the course; 85% indicated the performance made them think more deeply about work they were studying in the course; and 97% agreed that more performances of this type would be worthwhile.

Faculty response was equally positive. On an open-ended question concerning educational benefits, the positive response was virtually unanimous, and indicated that a wide range of learning took place across the departments involved. In several interviews between the HETC consultant-evaluator and 18 faculty members who had in-

cluded HETC in their classes, the response was again quite favorable. All said the service would be missed if discontinued.

Professors generally had two reasons for using HETC in their classrooms. One was to bring "alive" a portion of a course and to reinforce learning. All interviewed faculty indicated that they considered the affective sphere a necessary ingredient in learning, and this end was achieved by HETC performers. Evidence of cognitive learning was inferred from post performance discussion, papers about the performances, final projects stimulated by the HETC experience, and references to the performances on some examinations. The interviews also revealed that HETC had an impact on teachers as well as students. As an example, one faculty member mentioned that he was stimulated to further explore the aesthetic aspects of plays, as well their dramatic implications, in terms of their particular historical period, and symbolisms. Another mentioned that the performance stimulated new ideas about the work. The interviews with faculty members also resulted in several faculty recommendations. Among these were development of video-tapes to show how HETC can be used with various disciplines; more interaction between HETC and faculty before performances; workshops by HETC members with faculty so they can gain some proficiency in dramatic techniques; and more "involvement theatre" and creative drama techniques.

The graduate student-performers in HETC were also interviewed by the consultant. Although all thought the idea behind HETC was good, opinions concerning its implementation ranged from positive to negative. The list of positive aspects included: playing many different scripts and roles; disciplined and efficient use of time; one to one actor/audience relationship; and post-performance class discussions. Negative aspects included: reliance on a "bag-of-tricks" rather than in-depth character study because of the short preparation time; failure to satisfy a need to be in a " mainstage" production; and failure to allow for individual needs since all of the actors were required to take the same classes to avoid schedule conflicts. Like the faculty members, the actors offered several recommendations. These included: bringing the company together before the start of the fall semester so they could rehearse and get settled; having guest directors, especially mainstage directors; having an opportunity to be in a mainstage production; and having pre-performance meetings with instructors to provide for more effective pre-performance preparations and post-performance discussions for the class.

Dr. Rosenblatt offered the conclusion that "by all measures, the project was overwhelmingly successful." In addition to the recommendations offered by the students and faculty, the consultant recommended:

1. The HETC concept should be continued and maintained as an integral part of the fabric of the University with the same stability as the maintenance of other critical resources.
2. Periodic colloquia, seminars, and workshops should be conducted for the faculty to enhance their teaching strategies via the utilization of dramatistic techniques and to discover varying ways to more effectively take advantage of the services offered by HETC.
3. Expand the publicity efforts so that more faculty can become aware of the HETC.
4. Extend the services offered by HETC to the community, local schools, and civic organizations. The experiences at Metcalf School demonstrate the validity of this idea.
5. Explore the utilization of HETC in recruiting new students as an example of programs available at the University. This could be done live and via videotapes.
6. Serious consideration should be given the development of an interdisciplinary

CORE curriculum around the HETC concept.

In summary, one student comment relative to a scene from The Bear, illustrates the overall benefits of the project. He said, "The performance helped me in interpreting the play; things that I didn't catch in reading The Bear came out in the performance. Then there were things I read in The Bear which came out differently than I had imagined--it made me think and want to go back through the play to reexamine some points."

Introduction to Cultural Anthropology

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DESCRIPTION. In past years, approximately 1,000 students were enrolled each semester in "Introduction to Cultural Anthropology" (Sociology-Anthropology 180) which yielded three large sections of over 300 students each. In this arrangement, little time could be allowed for student questions or comments and student-instructor contact was minimized. Because each section covered basically the same material, there was a duplication of effort by the faculty teaching the course; however, selected emphasis on those areas in which the professor had a specific interest or higher level of expertise resulted in substantive differences among sections. Each section received the perspective which was characteristic of the professor teaching the course.

As a result, a plan to restructure SOA 180 was developed last year. The focus of the project this year was on the implementation of the restructured course. SOA 180 was offered in one section with several features designed to maximize the educational quality of the course.

The course was taught by a team of four professors. Each was responsible for lectures in which he had the greatest interest or competency. Extensive use of media, slides, tapes and movies was made. Relevant readings were selected from a major textbook and a series of readings was assembled by the team and published. Students were given the opportunity, but not required, to enroll for an additional credit hour in a discussion section of 5 to 20 students. These sections, each led by one of the professors met one hour per week and provided an opportunity for questions or comments about the lectures.

Student evaluation consisted of two exams. One was a midterm which covered 40% of the grade and the other a final which counted 60%. The exam format was short answer or multiple choice. Extra credit projects were not accepted.

Each semester, 30 class meetings were scheduled. Four meetings consisted of lectures delivered by all professors together. Three lectures were delivered by two-member teams. A total of eight films were shown throughout the semester. Non-film, single-person lectures comprised the other meetings.

EVALUATION/STATUS. Several methods were used to evaluate this project. These methods included a locally developed student questionnaire with room for open-ended comments administered at the end of the spring semester, 1974. A written final report from the faculty involved, University records germane to SOA 180, and data from the discussion sections were also used. From all these sources it is evident that students and faculty had mixed reactions to the course.

Throughout the planning stages an enrollment comparable to the preceding years was anticipated. Thus, it was surprising, if not disruptive, when the actual enrollment was considerably less. Instead of 1,000 each semester in SOA 180, there were 455 enrolled in fall '73, and 180 in spring '74. One-hundred twenty-two

and 61 students were registered in the fall and spring discussion sections, respectively. The best explanation for this phenomenon is in the scheduling conflicts presented by a single versus multiple section offering. What effect, if any, this reduction had on the quality of the course is unknown.

On the positive side, the self-perceived progress of students in awareness of different philosophies, cultures, and ways of life was significantly higher ($p < .01$) than educational progress in the same area as perceived by ISU freshmen as a whole. This favorable finding seemed directly related to the content of the course.

Other favorable responses were more related to the format. Students responded favorably to the discussion section concept. Eighty-eight percent felt they had contributed to a further understanding of the relevant course materials. This appreciation of the discussion sections was also shown in the open-ended comments. Students stated discussion sections helped maintain interest as well as make the content of the course more understandable. Faculty members were also pleased with the discussion sections and felt they fulfilled their objectives by "establishing student-teacher contact and exciting student interest beyond what is normally possible in a large class context." Also, students were generally appreciative of the extensive use of media and felt it increased interest in the subject matter (the faculty members felt their media skills developed considerably over the year and mentioned the side benefit that the department was able to substantially increase its inventory of audiovisual materials.) The majority of student response concerning the team teaching approach was favorable. About 75% of those who mentioned team teaching gave it a favorable rating, specifically because they felt it allowed for more viewpoints to be expressed and resulted in higher quality lectures since each professor was able to speak on areas which interested him most. One student wrote, "I think it is good to have a team so that you get more views of different areas--plus each may be more qualified to speak on different topics." However, about one-fourth of the students who mentioned team teaching were displeased with it mainly because they felt the lectures were not integrated and there was no consistent lecturer with whom they could become familiar. The faculty was also aware of the problems of integration and continuity between lectures. During the second semester they attempted to remedy the situation by introducing each lecture with a segment on its relationship to previous presentations.

The most pervasive student criticism was directed to the "insufficient" number of tests. Most students felt that having only two tests put too much pressure on them to do well on both and made them responsible for too much material for each. Also, because they were not tested often, many students felt they were not adequately motivated to learn or integrate the material. An additional criticism voiced by many students was the use of Capen Auditorium. Dimly lit and at times insufficiently heated, according to some, it may have adversely affected the lecture. (This course was originally planned for the University Union Auditorium.)

Another unfavorable commentary on the course was the fairly high withdrawal rate. During the fall, 33% of the students withdrew from the lecture class, and 34% withdrew from the discussion sections. The withdrawal rate improved considerably during the spring semester, however, as only 12% withdrew from the lecture and 20% withdrew from the discussions.

There was some disagreement among students and faculty concerning course content and the appropriate level of academic quality expected from the students. Several students expressed a desire for more practical experiences such as field work or case studies. This concern for practicality may have been part of the reason that the opinion of SOA 180 students concerning the relevance of the course was significantly lower ($p < .02$) than the opinion of ISU freshmen in general.

However, the course as designed by the faculty was intended to be an introduction to the "theory" of cultural anthropology and was not intended to be a "practical" course.

Related to this concern for relevance was the criticism voiced by many students that the lectures were too often beyond their level of understanding. This may explain in part why the opinion of SOA 180 students was significantly less favorable than the opinion of a comparable group of students at other colleges* concerning the general quality of lectures in lecture classes ($p < .01$) and social science classes ($p < .01$). This also may have been part of the reason that only 57% of SOA 180 students as opposed to 76% of ISU freshmen rated the quality of their educational experience at the university as either good or excellent. Many students remarked that they were required to retain too much information and too many details.

As expressed by the SOA 180 faculty, the negative student opinions about the lectures may have been partially the result of student failure to complete reading assignments. Also, the faculty members were aware that SOA 180 was intellecually demanding, and that this may have decreased the popularity of the course. But they felt that this generated better prepared and higher quality students who went on to more advanced coursework in anthropology.

A principal element of SOA 180 was the provision for discussion sections. Theoretically, the discussion sections were designed to intensify interest and increase understanding of the course content which it may be assumed should be reflected in the retention power and credit received. Withdrawals and failing grades for those in the discussion sections were compared against those not in the discussion sections. During the fall semester, 57 (50%) in the discussion section received a "W" or "F." Of those students not enrolled in a discussion section, 145 (44%) received a "W" or "F." During the spring semester, five (11%) in the discussion section received a "W" or "F." Of those students not enrolled in a discussion section, 31 (25%) received a "W" or "F." When both semesters are combined, the discrepancies average out, and there is no apparent advantage or disadvantage to being in a discussion section in terms of retention or credit.

Several things have been discovered or affirmed as a result of this project. SOA 180 students apparently developed more than their peers in awareness and understanding of different philosophies, cultures, and ways of life. This seemed to be a primary objective of the course. The use of discussion sections was firmly approved by students who felt the discussions had contributed to a further understanding of the materials, and by faculty members who felt the discussions had increased student interest. What is unclear and should be further explored if the discussion sections are continued, is the nature of the cognitive and affective benefits obtained. In this vein, the influence of discussion sections on participation and performance was not evident. The strong emphasis on media presentations seemed beneficial in increasing student interest and understanding and enabled those faculty members involved to develop their skills in using media. The problems with the lack of continuity among lectures serve to point out the potential problems in a team teaching approach. The value inherent in the presentation of several viewpoints and higher quality lectures is apparently diminished if some measures are not taken to insure integration and continuity from day to day. Next,

*Data for the national groups are found in: "Comparative Data for the Student Instructional Report, 1973-74," which is published by Educational Testing Service.

the course, which was intellectually demanding, both in terms of quality and depth of material, was very beneficial for some students--those who went on for more anthropology courses--but was perhaps too demanding and beyond the level of understanding of a great many other students. Composed of a very heterogeneous group of students with many different interests, motives, and needs, the course, while relating to the needs and interests of certain students, was not broad enough to relate to the needs and interests of all. Since there were not many tests to prod students into reading assigned materials, many students did not keep up with the readings. Thus, having inadequately prepared themselves for the lectures, they were less able to understand the often difficult and complex content. Also, the use of only two tests as the sole means of student evaluation put a great deal of pressure on students to do well on each and increased student anxiety. Finally, the consolidation of SOA 180 into one large team-taught section was initially appealing. Unforeseen was the fact that fewer students would actually enroll. In the spring semester, the few students enrolled made the course format somewhat impractical on a cost per student basis.

As a result of these developments and of economic considerations, the Sociology-Anthropology Department has decided to return to the format of several individual sections of SOA 180. However, many things were discovered and many benefits were attained as a result of the team teaching approach. This project should serve to point out to the rest of the University that perhaps the most substantial benefits of an educationally innovative project must be measured, not in terms of whether the project is continued, but in terms of what is learned and whether it serves to directly or indirectly improve the quality of education in the future.

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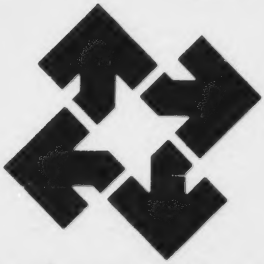

Undergraduate Teaching Assistant Program

The Undergraduate Teaching Assistant Program at Illinois State University

Stanley G. Rives and Eugene H. Jaiker

Within the last decade, the undergraduate's potential as a teaching assistant has been recognized. Bright, highly motivated undergraduates reportedly have made substantial contributions to their own and other students' learning in selected courses at a handful of universities and colleges across the country--Carleton,[1] Colorado State,[2] Cornell,[3] Michigan State,[4] Pittsburgh,[5] Tufts,[6] and Vanderbilt.[7] This is the report of a similar program at Illinois State University.

The Undergraduate Teaching Assistant (UTA) program at Illinois State University was established by the Office of Undergraduate Instruction during the 1973-74 academic year. Through an allocation of $65,000 for the academic year, 60 UTA positions were made available to the academic departments during the first semester. The number of positions was expanded to 80 for the second semester. The program was designed to involve junior or senior undergraduate students as assistants to the faculty teaching freshman-sophomore courses in the University Studies general education program and particularly in the large section University Studies courses.

The program was undertaken on a trial basis during 1973-74 hoping to discover answers to a series of questions: Can large numbers of undergraduate students (UTA's) make a meaningful contribution to the instructional process? Will academic departments devise creative and useful instructional activities for Undergraduate Assistants? Does the UTA experience merit academic credit, financial compensation, or some combination of both for the Undergraduate Teaching Assistant? Based on a year's experience with the program, will faculty members and academic departments support continuation of the UTA program? Will student UTA's find the program personally rewarding? Is an undergraduate teaching assistant program a workable idea? This report is addressed to these questions by describing (1) the University's Undergraduate Teaching Assistant program during its initial year of operation, and (2) the preliminary evaluation. Experience with the program during its initial year was largely successful so that continuation into the 1974-75 academic year and beyond is projected.

DESCRIPTION OF THE UTA PROGRAM. During the 1972-73 academic year, the University supported 35 separate instructional improvement projects under a $566,000 Educational Innovation Program (EIP) grant from the State of Illinois.[8] Several of these EIP projects utilized undergraduate students. The Department of English, for example, used undergraduate tutors in its competency-based approach to the basic composition course; Humanities, Philosophy and Sociology used undergraduate students as discussion section leaders. Based upon this experience and the undergraduate teaching assistant program inaugurated at the University of Pittsburgh during 1972-73, the Office of Undergraduate Instruction proposed establishment of the UTA program at Illinois State for 1973-74 under the following guidelines on responsibilities, selection, and reimbursement of UTA's.

Responsibilities of UTA's. Each academic department was invited to submit proposals for allocation of UTA positions, describing the proposed use of each position or functions to be performed by the UTA. University-wide guidelines specified that time devoted by the student UTA should not exceed ten hours per week and that UTA positions should be structured which would improve instruction as well as provide an opportunity for qualified undergraduates to learn through

participation in teaching--i.e., routine clerical duties were not to be performed by UTA's. One other University-wide guideline was: "As is customary in all courses, the faculty member is in charge of a course utilizing Undergraduate Teaching Assistants and retains the responsibility for course content and grading. Where UTA's are assigned the task of grading quizzes, laboratory manuals, or other student assignments, the student shall have the right to request a review of the grade by the faculty member."

Departments responded with requests for 293 UTA positions, which necessitated a careful review of requests in Undergraduate Instruction since only 60 positions were available. The following examples, from among departmental proposals submitted, illustrate the range of activity proposed for the UTA's.

Biological Sciences. "Undergraduate assistants will be assigned as a second laboratory instructor in one of the following courses: General Zoology 190, General Botony 121, Functional Anatomy 181 and 182, Zoology 191 and 192, Microbiology 260, Botony 122 and 123. The specific course will be dependent on the student's background and interest. The assistant will always be assigned to a laboratory section which has a regular faculty member in charge. The undergraduate assistant will function as a regular laboratory assistant; he or she will be asked to help prepare materials for the lab, work directly with the students during the laboratory, and assist in grading papers and laboratory reports. All of these activities will be supervised by the senior staff member who will make constructive criticisms and carefully evaluate the undergraduate assistant's performance in these activities. Presumably, as the assistant gains experience, he will be given more and more responsibility in the laboratory. We feel that in this way the undergraduate assistant will gain experience and receive guidance toward become as effective a laboratory instructor as possible during his tenure as an assistant."

Accounting. The department proposed that the UTA assist the faculty coordinator of Accounting 131. "The UTA would teach in sections of Accounting 131 occasionally. This person would work with the faculty member who coordinates the 20 some sections of this course. He would be involved with helping to check problem assignments, tests, and would be involved in tutoring students who need remedial help."

Economics. 'Each large section (of Economics 100 and 101 to which UTA's would be assigned) averages about 200 students. Each undergraduate assistant will be assigned to 100 of these students. The undergraduate assistants will maintain fixed office hours so that the students may consult with them. They will also hold optional discussion sections once a week which their assigned students may attend for small group instruction and discussions. About 25 students will be assigned to a discussion section. Hence, each undergraduate assistant will hold four discussion sections each week. One hour each week will be devoted to a joint meeting of the large section professor and his undergraduate assistants concerning material to be covered, special problems, etc. The remaining three hours each week will be devoted to assistance in large section instruction and the undergraduate assistant's preparation for his discussion sections. In sum, the following functions will be served by the undergraduate assistants: (1) answering student questions; (2) conducting small discussion sections; (3) assisting in teaching; (4) assisting in grading; and (5) exploring, observing, learning with and from an Economics faculty member. The aim is to make the undergraduate assistantship something which is of value to both the department and the undergraduate assistant. Hence, considerable emphasis will be placed upon the weekly meeting with the professor and the assistants so that the assis-

tantship can be a learning experience and not just an earning experience."

Based upon departmental proposals submitted, the Dean of Undergraduate Instruction assigned the available UTA positions to the departments, with an attempt being made to distribute the positions widely among the departments to gain experience with the program in a variety of disciplines.[9]

Selection of UTA's. Students were then invited to submit applications for the UTA program on a form similar to that included in Appendix D. More than 400 students applied.[10] Again, minimum University-wide criteria for selection were established by Undergraduate Instruction including: (1) outstanding performance in academic work done in the department and a normal expectation of a grade point average of 3 or above on a 4 point scale; (2) junior or senior standing; and (3) promise as a teacher as indicated by supporting recommendations from at least two faculty members, one of whom should be the instructor of the course in which the student proposed to be a teaching assistant. Students were also asked to state their qualifications and reasons for applying for the program on the UTA application form.

Academic departments were also invited to stipulate more specific selection criteria as related to the needs of the department. Two examples will illustrate departmental criteria established for the UTA program:

Biological Sciences. "The criteria that the department will use in selecting undergraduate teaching assistants will be: (1) the student must have an overall grade point of 3.2 or higher at the time of selection; (2) the student will usually be a junior or senior biology major; (3) the student will usually have completed at least 20 semester hours of credit in biology coursework and 8 hours of credit in chemistry at the time of selection; (4) the student must express an interest in assisting in one of the courses listed above; and (5) the student must request three letters of recommendation from biology professors. These letters must address themselves to the student's honesty, integrity, and potential as an instructor."

Philosophy. "(1) Outstanding performance in a reasonable amount (9-12 semester hours) of philosophical coursework; (2) Promise as a teacher, particularly skill in questioning and dialogue and ability to establish rapport with students while still exercising educational leadership; (3) superior philosophical critical and analytical abilities; (4) ability to talk and write about philosophical matters in a clear, illuminating, and stimulating manner; (5) genuine interest in students and in contributing to the richness of their educational and cultural experience in the University; and (6) personal maturity and integrity."

Applications were submitted to and reviewed by the departments with recommendations for appointment made by the department to the Dean of Undergraduate Instruction. Appointment letters to student UTA's stipulated that students participating in the program would be expected to respond to requests for evaluation of the experience.

Reimbursement of UTA's. All students participating in the UTA program received financial compensation and most also received academic credit. Standard compensation for Undergraduate Teaching Assistants was $450 a semester or $900 for the academic year, roughly $3.00 an hour of work expectation ($3.00 per hour x 10 hours per week x 15 weeks per semester = $450).

The matter of academic credit was handled in a flexible manner. University guidelines provided that a UTA "may be awarded 3 semester hours of credit in a requested 389 (experimental) course in the department labeled 'Undergraduate Teaching Experience in (discipline) '" and that "three hours is the maximum of this credit that may be allowed for graduation, although it may be arranged in 1,

2, or 3 hour blocks a semester as a department desires and a student may register for the course as long as he or she is a UTA." Where awarded, academic credit was assigned for enrollment in the course and not merely for the work experience as an Undergraduate Teaching Assistant, for which financial compensation was provided. Nineteen departments awarded such credit.[11]

EVALUATION OF THE PROGRAM.

Evaluation Procedures. Data were obtained from transcripts, participant reactions, and through responses to questionnaires designed for this purpose and administered at nine-week intervals to the UTA's and at the end of each semester to the faculty. The results of an experimental study conducted as part of the EIP Freshman English Composition project also germane to this purpose are reported in the preceding EIP section of this publication.

In the fall semester, 53 or 82% of the UTA's, and 42 or 65% of the faculty responded to the last questionnaire; in the spring semester, 68 or 72% of the UTA's and 60 or 63% of the faculty responded. The results which follow are based on these returns.

The UTA's. In the '73 fall semester, 65 undergraduates were selected and assigned to the 60 positions. The Departments of History, and Health, Physical Education and Recreation divided their positions into partial assignments which resulted in 65 rather than 60 persons assigned. In the '74 spring semester, 95 undergraduates were appointed to the 80 available positions. Males and females were almost equally represented in the total UTA population over the two semesters.

On the whole, the UTA's were outstanding students. Although there were some exceptions to the expectation that a grade point average of 3.0 on a 4.0 scale be required for appointment, most of the UTA's exceeded this minimum by a comfortable margin. The average cumulative grade point average of the UTA's in the fall was 3.54; in the spring, it was 3.51. The other selection criteria, namely, outstanding performance in academic work done in the department and promise as a teacher, was assumed from the departmental appointment. Since the number of applications exceeded the number of positions available, the departments were able to be highly selective and appoint only those persons who had the potential of providing maximum assistance.

UTA Responsibilities and Allocation of Time. Minimum guidelines for the program were established by the Office of Undergraduate Instruction. These included limitations on the amount of time to be expended by the UTA each week and the general functions of the UTA with specific emphasis that the UTA not be used for routine clerical duties. Within these guidelines, each department was allowed to designate the responsibilities which would be most appropriate to their specific subject areas. Eight general categories of activity were abstracted: conference/tutoring, grading, preparation of materials, direct instruction, classroom aid, clerical, liaison between students and faculty, and preparation for the UTA responsibilities. The average hours per week, the percentage of this time devoted to each category, and the range of hours per week for both the fall and spring semesters as reported by faculty and UTA's are presented in Table 1.

The data reported in this table are aggregate self-reported estimates collected at the end of each semester. As such, they are subject to distortion, biases, and the vagaries of memory; nevertheless, there are certain consistencies between semesters and between groups which are worthy of note. Students consistently reported a greater number of hours expended on their UTA responsi-

TABLE 1

UTA Responsibilities and Allocation of Time

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	Total Avg. Hrs./Wk.			Avg. Hrs./Wk. by Category of Activity							
	A*	V	S	Conf./ Tutor.	Grading	Prep. Matrls.	Teaching	Clsrm. Aide	Clerical	UTA Prep.	Liaison
UTA's Estimates: Fall '73											
Avg. Hrs./Wk.	7.65	3.90	11.55	1.80	1.40	2.55	2.31	1.88	.51	.77	.33
Percent	66	34		16	12	22	20	16	4	7	3
Range	3-20	0-12	6-25	0-12	0-5.7	0-9.5	0-8.0	0-11	0-3	0-5.3	0-4.25
Spring '74											
Avg. Hrs./Wk.	7.8	4.0	11.88	2.4	1.5	1.8	2.1	1.8	.7	1.1	.4
Percent	66	34		21	12	15	18	15	6	10	3
Range	0-15	0-17	8-28.5	0-14.3	0-5	0-10.5	0-11	0-9.8	0-6.5	0-5.2	0-3.4
Faculty Estimates: Fall '73											
Avg. Hrs./Wk.	7.64	2.12	9.76	2.20	.92	1.43	2.06	1.97	.33	.63	.22
Percent	78	22		23	9	15	21	20	3	7	2
Range	6-20	0-10	3-25	0-9.4	0-4.2	0-5.0	0-8.0	0-20	0-2.0	0-5.7	0-1.5
Spring '74											
Avg. Hrs./Wk.	7.55	2.45	10.0	1.89	1.58	1.33	1.78	1.72	.58	.84	.28
Percent	76	24		19	16	13	18	17	6	8	3
Range	3-22	0-12	6.5-22	0-10.8	0-7.5	0-7.7	0-11	0-12.2	0-5.0	0-4.4	0-2.2

*A = Assigned, V = Voluntary, S = Sum

bilities per week than did the faculty. For the most part, this appears to be due to the voluntary activities of the UTA's. Both groups were almost in complete agreement on the number of hours assigned. It is very unlikely that the faculty would be aware of the total number of hours the UTA voluntarily dedicated to the tasks; thus, the discrepancies seem warranted.

The faculty also underestimated the amount of time devoted to grading and preparation of materials. Again, this can be explained by the relatively nonpublic nature of these activities. By contrast, there was a very close correspondence between the estimates for teaching and classroom aid activities, both of which would be more observable and verifiable.

The hours distributed across the responsibilities seem to meet the expectations of the guidelines--i.e., for the most part, students were not asked to perform routine clerical duties. There were some exceptions as noted in the range. In the second semester, spring '74, at least one UTA and one faculty member reported that 6.5 and 5 hours were devoted respectively per week to clerical duties.

The faculty seemed to be aware and sensitive to what the individual UTA's were doing and how much time they devoted to the tasks. There were some exceptions. One UTA reported an average of 20 hours per week devoted to the UTA responsibilities. By contrast, the faculty thought that only 8 hours had been devoted. The greatest discrepancies were in those categories which were least observable--grading and preparation of materials. For others, similar discrepancies are reported in the nonpublic versus public activities. Some UTA's devoted more time to responsibilities than were observed and/or possibly expected by faculty.

Effects on the UTA's Academic Record. It was assumed the UTA experience would contribute to the undergraduate's learning in the discipline, but it was unknown whether or not the experience would also affect the quality of coursework outside the discipline. Transcripts were reviewed to determine the effects.

In each semester of the UTA experience, the composite Grade Point Average (GPA) of the UTA's was higher than the preceding non-UTA semester. By contrast, a stratified random sample of non-UTA's with GPA's in excess of 3.5 showed a decrease between semesters. Specifically, the composite increases for the UTA's in the fall '73 and spring '74 semesters were .06 and .11, respectively; whereas, the decrease for the non-UTA's was .06. If the grade points awarded for the UTA experience--389.75 Undergraduate Teaching Experience in (discipline) --were discounted, the differences were reduced but not reversed: fall semester UTA's, .00; spring semester UTA's, .07. The differences for non-UTA's obviously were not affected.

Taken at face value, it seems the UTA experience may have had both general and specific positive effects; however, the increment or stability in GPA may be a result of other factors--too complex to understand at this point. Regardless of the reasons, the most important conclusion lies in the apparent absence of deleterious effects as a result of the UTA experience.

Effects on the Participants. The questionnaire administered in the spring contained three sections designed to elicit reactions from the UTA's and the faculty about the effects on three audiences: the UTA, the faculty, and the students. A 5 point scale was used to permit ratings of the degree of improvement or negative effects. This scale was collapsed to produce three categories. The percentage of responses in each category are presented in Tables, 2, 3, and 4.

In sum, both faculty and UTA's felt the experience produced substantial improvement in almost every category. The UTA's responses indicated they

TABLE 2

Effects of the UTA Experience on the UTA

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	Percent of UTA Responses			Percent of Faculty Responses		
	Some or Significant Improvement	No Effect	Some or Significant Negative Effect	Some or Significant Improvement	No Effect	Some or Significant Negative Effect
a. Sense of membership in the academic community	87	13		73	27	
b. Techniques in organizing and searching for information	70	31		68	32	
c. Ability to conduct and encourage discussions	84	16		80	20	
d. Knowledge of classroom procedures	85	15		85	13	2
e. Interest in the discipline	87	10	3	73	25	2
f. Confidence before a group	85	15		89	11	
g. Sensitivity to the problems of teaching	94	6		91	7	2
h. Grade point in other courses	16	69	15	10	88	2
i. Knowledge about the subject matter or discipline	94	6		88	12	
j. Awareness of personal strengths and weaknesses	90	10		82	18	
k. Ability to communicate clearly	88	12		89	11	
l. Sensitivity to student's difficulties with the subject matter, class, book, etc.	90	10		88	12	

TABLE 3

Effects of the UTA Experience on the Faculty

BEST COPY AVAILABLE

	Percent of UTA Responses			Percent of Faculty Responses		
	Some or Significant Improvement	No Effect	Some or Significant Negative Effect	Some or Significant Improvement	No Effect	Some or Significant Negative Effect
a. Time for preparation	63	37		71	22	7
b. Contact with students	55	41	4	83	22	5
c. Quality of instruction	51	49		75	23	2
d. Sensitivity to students' concerns	65	34	1	68	30	2
e. Grading and testing	53	47		65	32	3
f. Quality of goals and requirements for the class(es)	44	56		68	32	3
g. Research or project activities	47	53		38	62	
h. Writing for publication	19	79	2	20	75	5

TABLE 4

Effects of the UTA Experience on the Students

BEST COPY AVAILABLE

	Percent of UTA Responses			Percent of Faculty Responses		
	Some or Significant Improvement	No Effect	Some or Significant Negative Effect	Some or Significant Improvement	No Effect	Some or Significant Negative Effect
a. Knowledge of the subject	81	19		81	17	2
b. Desire to learn	55	45		68	32	
c. Interest in the subject	62	38		73	27	
d. Attendance	32	62	6	40	58	2
e. Solution of problems	82	18		69	28	2
f. Personal attention	88	12		80	18	2

felt some or significant improvement occurred in every category with the exception of the change of grade point in other courses--an opinion supported in the preceding discussion about the effects of the program on the academic records. In general, the UTA's rated their improvement higher than did the faculty, although in two categories--Confidence Before a Group, and Ability to Communicate Clearly--the faculty rated the students higher than they did themselves.

In a similar vein, the faculty rated the effect of the UTA experience on themselves higher than did the UTA's. In only one category, Research or Project Activities, were the UTA's ratings higher than the faculty's. The relatively low level of improvement in research or project activities and writing for publication indirectly supports the finding at other institutions that adequate supervision may take more time than if the activity were conducted by the faculty themselves. One faculty supervisor at ISU commented, "I strongly approve of the UTA program in . . .; I think the UTA's are much better prepared to be teachers. However, if UTA's are properly supervised, trained, and criticized, it really adds more to the faculty member's work load, rather than making it lighter. Maybe it's like supervising a student teacher . . . ."

The UTA's and the faculty both reported improvement for students in all categories with the exception of attendance. That any improvement in attendance was reported at all may be significant inasmuch as the percentage for improvement was substantially greater than the percentage for negative effects. The faculty perceived the UTA's effect upon the students in terms of the desire to learn and interest in the subject substantially greater than did the UTA's. This may have been a more valid response than the UTA's inasmuch as the faculty probably had a better base of experience with which to compare the UTA's effect than did the UTA's.

Attitudes Toward the Program. At the end of the '73 fall semester, both faculty and UTA's were asked to respond to 39 questions constructed to obtain evaluative reactions to five dimensions of the UTA experience: (1) uses of the UTA; (2) faculty and departmental administration of the experiences; (3) the time required by the experience for both faculty and UTA; (4) certain conditions which were instrumental to the program; and (5) perceived outcomes in three areas: (a) effects on students, UTA's and faculty; (b) attitudes; and (c) skills.

A 5 point rating scale was used for each question ranging from extremely positive to extremely negative. In general, both faculty and UTA's perceived the use of the UTA similarly. On only one question (concern for greater voice in decision making) did faculty and UTA's differ significantly. As might be expected, the students felt more strongly that they should have a greater voice in decision making than the faculty. Neither faculty nor UTA's felt the time and effort for the coordination and supervision of the UTA experience was excessive; however, the faculty and UTA's disagreed on the appropriate amount of supervision. The concern for autonomy versus control was evident in the reactions to these questions.

Neither the faculty nor the UTA's said the UTA's duties required too much time, nor did either group of respondents believe there was too much to do. In general, both groups felt the UTA's had not had a deleterious effect upon instruction and the faculty felt more strongly than the UTA's that the program had improved instruction, evaluation, and preparation.

Both groups indicated the experience significantly increased the UTA's desire to teach, with the UTA's being more convinced on this point than the faculty. Both groups said the interest in discipline had been increased by the experience and a sense of academic community for the UTA's had been improved.

Neither group felt the experience was frustrating, although the faculty's reaction was much stronger than the UTA's. Teaching skills of the UTA's were perceived as being significantly improved, but there were mixed opinions on some specific dimensions of teaching, e.g., neither group believed there was a clear-cut effect upon the UTA's ability to improve techniques for organizing and searching for information. Perhaps the most significant impact on the UTA was the recognition of personal weaknesses and strengths.

Some of the 39 items from the fall semester questionnaire were revised and reorganized to produce a revised section on Attitudes Toward the Program in the spring '74 questionnaire. The percentage of responses which were in agreement, disagreement or reflected no opinion for both UTA's and faculty are presented in Table 5.

TABLE 5

Attitudes Toward the Program

	Percent of UTA Responses			Percent of Faculty Responses		
	Agree or Strongly Agree	Do Not Know or No opinion	Disagree or Strongly Disagree	Agree or Strongly Agree	Do not Know or No Opinion	Disagree or Strongly Disagree
UTA's should be majors or minors in a departmental teacher education program.	56	6	36	40	8	52
The responsibilities expected of me as a UTA were adequately described at the time of application.	61	10	29	67	15	18
Students should have the option of a one- or two-semester assignment.	82	10	8	60	20	20
Credit should be given for the UTA activities only--other requirements are unnecessary.	32	29	39	32	28	40
There should be greater uniformity among departments regarding working hours, compensation (credit and money), and responsibilities of UTA's.	52	30	18	45	32	23
My abilities were used to the fullest extent possible.	48	24	28	69	15	16
I feel my opinions and ideas were respected and considered by the faculty.	85	13	2	95	3	2
An insight into the "other side of the lectern" was achieved.	87	12	1	87	8	5

In general, both UTA's and faculty responses were comparable for the items in this section. And, in general, the "preferred" rating was selected by most respondents; for example, the majority of the respondents indicated the UTA's opinions and ideas were respected and considered by the faculty.

Although there was substantial agreement among the respondents, the UTA's and faculty were not in total agreement. Nor was there total agreement between semesters. The items in this section were primarily concerned with opinions, and it must be assumed, as in the preceding section on effects, opinions were less observable and therefore less easily validated than more overt acts. This alone could account for some of the differences. Of significance to the program and its future were the disagreements between groups regarding the extent to which the abilities were used. The UTA's were less convinced they were used

TABLE 5--Continued

	Percent of UTA Responses			Percent of Faculty Responses		
	Agree or Strongly Agree	Do Not Know or No Opinion	Disagree or Strongly Disagree	Agree or Strongly Agree	Do Not Know or No Opinion	Disagree or Strongly Disagree
Students were not certain how much authority I had.	42	16	42	23	25	52
My assigned and voluntary responsibilities required too much time.	9	9	82	8	17	75
I was not adequately respected by the students.	18	12	70	10	14	76
My desire to become a teacher was increased.	61	31	8	48	42	10
My authority was appropriate to my responsibilities.	69	21	13	88	10	2
Many of the tasks which I was assigned were unimportant and menial.	12	4	84	7	2	91
I frequently had time with little or nothing to do.	15	6	79	12	11	77
The supervision and instruction for my responsibilities was appropriate.	72	13	15	77	18	5
I had too little responsibility for grades.	12	26	62	10	13	77
The reimbursement (credit and/or money) for my work was adequate.	75	6	19	65	15	20
The UTA experience was frustrating.	16	16	68	12	15	73
UTA's should not register for more than 12 hours per semester (including the UTA course).	28	22	50	16	25	59
The UTA program should be continued and expanded.	94	6		93	5	2

to the fullest than were the faculty. A similar question on the fall questionnaire resulted in almost perfect agreement between the faculty and the UTA's although the percentages of agreement for both groups were lower. Apparently it takes some time for the faculty to clearly understand what undergraduates can and should do and it would seem that the trend is for increased rather than for decreased use in the future.

The faculty and UTA's were not of one mind on the quality and value of most of the experiences; however, on one item, there was almost complete agreement. Both UTA's and faculty in both semesters strongly endorsed the continuation and expansion of the UTA program.

Discussion and Summary. From the outset and throughout the year, answers to the questions posed in the introduction have been a major concern of the Office of Undergraduate Instruction. Although previous experience at Illinois State and elsewhere indicated a limited number of undergraduates could be used successfully as teaching assistants, there was no evidence that large numbers of undergraduates could be used effectively across the campus--especially in departments which had no previous experience.

Can large numbers of undergraduate students (UTA's) make a meaningful contribution to the instructional process? The results of programs at ISU and other institutions in which small numbers of undergraduates were used as teaching assistants under carefully controlled conditions clearly supported a positive response. At the University of New Hampshire,[12] extremely precise and comprehensive procedures for selection and training of undergraduate teaching assistants for large personalized instruction (PSI) courses in Introductory Psychology were reported. Comparable procedures were used at Colorado State University.[13] In both programs, the undergraduates were reported to have contributed substantially to the instructional program.

Selection procedures in the Illinois State University program paralleled the procedures at the institutions cited; however, there is some doubt that provisions for training were comparable. The faculty at ISU were also less certain although generally positive about the contributions of the UTA's to the instructional program. Selected example comments were:

> "I feel the time I devoted to this project was more than I would have spent with student help or clerical supervision. The special projects . . . carried out were well done and contributed to the . . . program. I am satisfied that my time commitment contributed to the further development of this young man for a business responsibility which will include teaching, at least informally. I viewed this project as an opportunity to serve, not as a way to reduce my own workload, and that is the way it worked out."
>
> "My UTA's have been topnotch; better on the average than my assistants. I have utter confidence in the teaching ability of these UTA's."
>
> ". . . was disappointing in his inability (or unwillingness) to follow simple, clearly defined instructions."
>
> "I could not have had more competent, personable, or effective UTA's than . . ."
>
> "I am not sure of some of these answers. This has been a pleasant and helpful experience for me and I think . . . has learned about the subject matter field and the education process. This is my first experience with a UTA and I would not want to be responsible for many at one time. I certainly think it is helpful to the instructor

and useful for students to gain experience and mature. A UTA would be helpful in a regular-sized class (40-50) to lead discussions, help with presentations and serve as liaison with students."

The department chairpersons were unanimously favorable toward the program. Selective comments from the department chairpersons illustrating this reaction were:

> "In my opinion, the UTA program is one of the best among the innovative things which have been started at ISU in the past year. I am very supportive of this program and believe that it should be expanded. Not only does this program provide some much-needed assistance for faculty, but more important, it provides a unique and extremely valuable experience for the undergraduate student fortunate enough to be selected for the program."
>
> ". . ., UTA's have proven to be extremely valuable to the instructional process in . . . This has been particularly true for two reasons. First, . . . maintains a large number of large sections, some of which number up to 500 students and UTA's are indispensable to such classes as tutors, helpers, etc. Second, the quantitative sequences in the . . . department . . . are of the nature that they require tutoring and problem sessions. UTA's are exactly what is needed here. In sum, UTA's are essential to our program."

The question to which this extended series of quotations and references are devoted is whether or not large numbers of UTA's can make meaningful contributions to the instructional process. The answer in a word is yes--if appropriate supervision and training is provided. Faculty seemed to be more sensitive to the problems inherent in this arrangement than chairpersons, thus, they were less enthusiastic in their endorsement. Supervision and training requires substantial amounts of time and effort by faculty if done well, and not all faculty members seem to be completely convinced the expenditures are worth the rewards.

Will academic departments devise creative and useful activities for UTA's? To the extent that departments had not used undergraduates in tutorial, direct instructional, or liaison roles in the past, the activities may be defined as "creative." Typical responsibilities for undergraduate non-UTA student help traditionally have been grading, preparation of materials, classroom assistance, and clerical duties.

There is little doubt that most UTA activities were perceived as useful. The selection procedures alone almost assured the highest quality students available, thus, whatever activity was assigned or performed typically had a corresponding quality. One faculty member's comment illustrated this point excellently:

> "Their presence has come to play a very major role in our . . . course. It is because of their willingness that we are able to offer a major retesting program in the skills of this course. Their enthusiasm has been first rate, their cooperativeness has been without want, and in general they were one hell of a lot of help to me. I felt that I could depend on them--no need to look over their shoulders. Feedback from the students was tremendous in response to the UTA's."

Clearly, some UTA's were enthused by their new roles as "teachers." By the same token, the UTA's indicated the tasks were appropriate, and there was little "dead" time for them even if the tasks were more or less routine.

Some of the UTA's comments relevant to this question were:

> "My responsibilities as a UTA, I believe, were somewhat different than usual. There was no formal lecture-classroom situation. During

the semester I worked on a level equal to that of the instructor, which at times caused problems as the students were not sure of the extent of my authority. I think it all worked well, however, and I am looking forward to continuing in and with the program."

"For me, the UTA was a very worthwhile course. I was given total responsibility of a few class periods. I helped with all areas of teaching, the prep, clean-up, grading, etc. I feel Mr. . . . gave me a well-rounded course of just what teaching is and what it takes to be a teacher."

"I had two different assignments, one grading papers, one helping in a lab."

". . . anybody can grade prepared quizzes and make sure nobody rips the place off."

For some of the UTA's, the tasks were novel and therefore creative. For others, the tasks were more mundane and more or less useful but would be a surprise in an effort this large if some of the time and talent of the UTA's weren't wasted.

Does the UTA experience merit academic credit, financial compensation or some combination of both for the UTA experience? The divergence of opinion on this question was greater than for any other among departments, faculty, and UTA's. As might be expected, most of the UTA's wanted some combination of credit and financial compensation, although for some, neither credit nor money was as important as transcript recognition. Faculty and departments, on the other hand, apparently discriminated between service to other students and learning experience for the UTA's--service merits financial compensation (which all received), and learning merits credit. Nineteen departments recognized both, others recognized only service.

At Vanderbilt University,[14] where the distinction between service and learning was also recognized, credit only was awarded. Both credit and financial compensation were allowed at Colorado State University.[15]

The chairperson in one department at ISU in which credit was not awarded, commented on the values of service and personal learning:

"The faculty report that their (UTA's) work is fine . . . The fact that one does learn more of the discipline as a course assistant and that they are able to retain and use or generalize more knowledge as the chance to explain is provided justifies this type of assignment."

Selected comments from the faculty were:

"This UTA experience has had a positive effect on . . .--she is changing her major . . . and wishes to pursue a teaching career. In view of the large number of service courses in . . ., I am in favor of allowing talented, mature students to teach with supervision. Considering the time spent in preparation and teaching, and the quality of instruction, I believe the salary should be increased."

". . . is very reliable and if grades are to be given, she deserves an 'A'. She has definitely been able to make decisions."

Selected student comments were:

"The only thing I would change is that I might get some hour credit for my UTA experience."

"I feel that the responsibilities for UTA's should be more closely regulated from outside of the departments. For instance, I know the UTA's for the . . . department merely had six hours of office hours per week for which they received $450 per semester and only two stu-

dents came to see them all semester. It seems like a waste of money to me."

"Personally, as a UTA, I feel that I was exploited, that is, my worth as a UTA was worth much more to the administration than $450. I know it would cost a lot more than this to have another faculty member . . . ."

"It was a fantastic educational experience. I learned much from supervising professors who were very helpful with suggestions and materials."

"Remuneration is not essential, but the work required of the position is such that remuneration is certainly warranted."

"My strong feelings are that the . . . UTA which I experienced should receive academic credit (3 semester hours) in addition to the salary. I actually became so engrossed with my responsibility until I neglected portions of my personal academic work. A UTA who knows that his performance will be evaluated in terms of credit will be inclined to perform maximally."

The issue is complex. One department conducted a seminar in teaching for which credit was awarded, and then reimbursed the UTA's for their service as tutors. Another department required additional hours of work as a condition for credit without a formal training arrangement. Other departments, in which credit was awarded, apparently relied on more or less informal communications between the faculty and the UTA. UTA's think of the credit as a motivational device, a screening system, deserved, additional compensation, unnecessary and/or unfairly administered. For some faculty and UTA's, the financial compensation was excessive, niggardly, adequate, and/or unnecessary. Some departments expressed a concern that the monies for the program might have been at the expense of their graduate assistant program, a fear that was not confirmed. The issues of departmental autonomy and program flexibility were also at stake.

If, in fact, the guidelines were abused by some departments and faculty, it should be recognized the faculty received no personal benefits for their additional responsibilities. The reward system was asymmetrical. Undergraduates received money, credit and improved skills from the experience whereas the faculty were expected to provide training and supervision, if credit was awarded, without compensation.

Will faculty members and academic departments support continuation of the program? Although some faculty expressed reservations about the time and effort required to supervise and train UTA's adequately, the answer to this question was a resounding yes. Each semester, over 90 per cent of the faculty indicated the program should be continued.

The following comment suggests the general tenor of the opinions expressed by the department chairpersons. Some were more, and some were less euphoric--but all contained a similar sentiment. "The UTA program, in my opinion, is an unqualified success in the . . . department. I believe most faculty in our department agree with me that the program not only benefitted the UTA's in their education, but also the students the UTA's serve."

Will student UTA's find the program personally rewarding? Many students lauded the program with unqualified praise; some were more reserved, even critical; and some made suggestions for improvement. The forms of reward were equally varied. Some saw the UTA experience in terms of entree to graduate assistantships at ISU and elsewhere; some appreciated more the difficult tasks of teaching; some were able to know the faculty better; some acknowledge an improve-

ment in interpersonal and leadership skills; some appreciated the money; and some were disappointed.

The high percentages of rated improvement in the Effects section of the questionnaire attested to the value of the program. The comments selected for inclusion here were equally convincing.

"I found the experience to be invaluable for high school teaching."

". . . I feel I have positively gained in some important areas. Perhaps the biggest and most helpful result was the chance to get behind the scenes a little in the University. This has reinforced my desire to further my education."

"I thoroughly enjoyed the UTA experience. I enjoyed the students and my association with them."

"This program has been the best and most profitable learning experience on campus here. The reason for that has been that I was able to use immediately the theory I learned in class. I have been very grateful for the opportunity to be in the program and feel it has put me at a great advantage experience-wise."

"I don't like the faculty I'm assisting at all. He's too picky."

"A great experience, very valuable."

Is an undergraduate teaching assistant program a workable idea? Overall, the program seemed to work well. There are still some deficiencies and areas of needed improvement which may be important to the future of the program. Perhaps the most significant problem area is the relatively low level of supervision and training. It may be that a minimum number of UTA's are required per department or course in order that students will receive adequate training and faculty members may receive adequate compensation for their efforts. The strengths of the program seem to lie in the flexibility, autonomy, individualization and quality of the undergraduates. As long as the program is able to attract superior undergraduates, it is likely that the program will continue to work.

FOOTNOTES

1. Harriet W. Sheridan, personal communication, June 10, 1974. "The Carleton Rhetoric Teaching Assistant Program."

2. Frank J. Vattano, et al. Employing undergraduate students in the teaching of psychology. APA Newsletter: Division on the Teaching of Psychology, March, 1973, pp. 9-13.

3. James B. Maas and Virginia M. Pressler. The role of undergraduate teaching assistants in introductory psychology. APA Newsletter: Division on the Teaching of Psychology, March, 1973, pp. 7-9.

4. Charles Wrigley. Undergraduate students as teachers: apprenticeship in the university classroom. APA Newsletter: Division on the Teaching of Psychology, March, 1973, pp. 5-7.

5. We acknowledge with gratitude our reliance upon program guidelines established for the UTA program at the University of Pittsburgh, particularly the

generous assistance of Provost Rhoten Smith (the former President of Northern Illinois University) in providing information concerning operation of the program at Pittsburgh.

6. Robyn Gittleman, personal communication, June 17, 1974. "Tufts Experimental College."

7. Bruce Bloxom, et al. On the use of student led discussion groups. Vanderbilt University (mimeo).

8. Each of these 35 projects is described in detail in Innovation at Illinois State University, 1972-73 (ERIC No. EDO 82694).

9. The actual allocation of positions for first semester was: Accounting (3), Agriculture (1), Art (2), Biology (2), Business Administration (2), Business Education (1), Chemistry (3), Economics (2), Education (2), Elementary Education (2), English (6), Geography-Geology (1), Health, Physical Education and Recreation (2), History (5), Home Economics-Industrial Technology (2), Information Sciences (1), Mathematics (2), Music (2), Philosophy (2), Physics (2), Political Science (3), Psychology (2), Sociology-Anthropology (5), Special Education (2), Theatre (2), and University High School (1).

10. An exact count is not possible since applications were submitted directly to departments rather than Undergraduate Instruction. Our estimate is based upon the number of applications obtained by students and a knowledge that many departments had at least ten applications for each available position.

11. Departments awarding credit under the UTA program were Accounting, Agriculture, Art, Biological Sciences, Business Administration, Business Education, Curriculum and Instruction, Economics, English, Geography-Geology, Health, Physical Education and Recreation, Home Economics and Industrial Technology, Mathematics, Music, Philosophy, Physics, Political Science, Sociology-Anthropology, and History.

12. Peter S. Fernald. The selection and training of undergraduate teaching assistants for large personalized instruction courses. APA Newsletter: Division on the Teaching of Psychology, March, 1973, pp. 3-5.

13. Vattano. APA Newsletter, pp. 9-13.

14. Bloxom. Vanderbilt University (mimeo).

15. Vattano. APA Newsletter, pp. 9-13.

Appendix A

Systematic Student Input Into Evaluation Of An Educational Innovation Program

Ronald S. Halinski and Tse-Kia Tcheng

INTRODUCTION. The ongoing purpose of this project is to develop a longitudinal data base which would provide for systematic student input into the curricular planning and evaluation functions of the University. An immediate need for the data base was brought about by the implementation of a program of educational and instructional innovation. Under that program, 35 projects were funded and each was separately evaluated. These projects involved most of the departments of the University and included as a major thrust either development, implementation, or evaluation type activities. (For example, one project restructured three courses into a single competency-based course; another project used professional actors to present live dramatizations in regular classes; a third engaged in an extensive evaluation of the department's principal general education course.) In addition, 50 instructors received small grants to develop innovative instructional practices. Totally, 20 percent of the faculty were engaged in activities designed to improve the quality of instruction. Financial support exceeded one-half million dollars. The objectives, activities, and evaluation of these projects are described in more detail elsewhere.[1]

In addition to any successes enjoyed by the individual projects, one might also expect a type of ripple effect. Project faculty taught additional courses and the possibility of carryover existed. Project ideas provided examples for others to emulate. But probably most important, the formalized innovation program provided an explicit commitment to improving the quality of instruction and legitimized such endeavors as appropriate for professional activities. Thus, what appeared necessary was the development of a strategy which might get at the overall impact of the program.

PROCEDURE. Baseline data was gathered in March, 1973. Four forms of a modularized questionnaire were developed from measures in the Higher Education Measurement and Evaluation Kit prepared by the staff of the Higher Education Evaluation Program under the directorship of C. Robert Pace. Information of the following types was elicited: (1) overall satisfaction with the instructional program; (2) general satisfaction with various instructional formats; (3) expected and actual progress toward the attainment of broad educational objectives and benefits classified into vocational, general education, critical thinking and human relations categories; (4) activities and interest in the general culture; (5) student characteristics. Two hundred thirty-two items were divided into subgroups and these were distributed among the four questionnaires so that no form would take longer than 15 minutes to complete. All undergraduate classes meeting at 9:00 A.M. on a Wednesday were included in the survey. Questionnaires were completed anonymously during the class period. To increase the likelihood of representativeness, the four forms were intermingled sequentially when they were packaged for distribution. Some 4,000 responses were gathered for an 80% return. The nonrespondents were students who were absent or who were in classes where the instructor declined to take part. Neither source of bias was considered serious. In particular, it appeared that the subgroup of students who

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Paper presented at American Education Research Association Annual Meeting, April, 1974.

miss a proportion of their classes were actually represented since some of the students attending the 9:00 A.M. class would likely miss classes at other times during the day.

The original survey with two modifications was replicated in mid-February, 1974. (The difference in time of year was due to a change in the school calendar.) The two modifications included eliminating some subgroups of items and distributing the remaining ones among three forms of the questionnaire and administering the questionnaire to 10:00 A.M. classes. Some 4,600 responses were received for an approximate return of 75%.

RESULTS. Overall Satisfaction. If students feel that what they are doing is worthwhile and view the University favorably, they are more likely to be productive and to take advantage of the many opportunities available to them. Table 1 summarizes the results of several attempts to determine globally student feelings regarding the University and the quality of education they are receiving. Class means were weighted according to the proportion of students in each class based on actual headcount. The proportions changed from '73 to '74 but in each case were in the neighborhood of .25. To produce a measure for comparison purposes which is independent of the changing pattern of enrollment, the class means were also weighted equally to arrive at a composite value for the four classes.

In general, the results show a movement to greater satisfaction with the University, although the movement is small. As to be expected, the large sample sizes allow for small observed differences to be statistically significant. As yet, we do not have sufficient experience with these measures to make judgments of practical significance. There are two other observations based on these tables which you may have noted: first, the results are most favorable for the senior class, and secondly, the method of weighting did not make any material difference in the results.

Informational Format. Students were asked to check which types of instructional formats they had experienced at ISU and their overall degree of satisfaction with such experience (Scale: 1 = Highly Dissatisfied to 5 = Highly Satisfied). In Table 2, two types of data are reported for both 1973 and 1974. First, the percentage of students who indicated they had experienced an instructional format at least once at the University is shown. Secondly, of those who had experienced the particular format, the mean "satisfaction" ratings are reported.

Table 1. General Satisfaction of Students With the University.

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Item	Class	1973 Mean	1974 Mean	Significance
1. Overall Quality of Instruction (Scale: 1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor)	Fr	2.16	2.17	n.s.
	Soph	2.21	2.21	n.s.
	Jr	2.20	2.16	n.s.
	Sr	2.25	2.17*	p< .05
Weighted Mean (Headcount)		2.21	2.18*	p< .05
Weighted Mean (Weight = .25)		2.21	2.18*	p< .10
2. Relevance of Educational Experiences (Scale: 1 = Definitely Yes, 2 = Generally Yes, 3 = Generally No, 4 = Definitely No)	Fr	2.14	2.14	n.s.
	Soph	2.20	2.15	n.s.
	Jr	2.11	2.05*	p< .10
	Sr	2.18	2.08*	p< .01
Weighted Mean (Headcount)		2.16	2.10*	p< .001
Weighted Mean (Weight = .25)		2.16	2.10*	p< .001
3. University's Concern for the Individual (Scale: 1 = Definitely Yes, 2 = Generally Yes, 3 = Generally No, 4 = Definitely No)	Fr	2.68*	2.76	p< .05
	Soph	2.80	2.84	n.s.
	Jr	2.78	2.76	n.s.
	Sr	2.85	2.76*	p< .05
Weighted Mean (Headcount)		2.78	2.78	n.s.
Weighted Mean (Weight = .25)		2.78	2.78	n.s.

* Indicates more favorable response when difference is significant.

Approximate sample sizes for each question:

	1973	1974
Fr	N = 1160	N = 827
Soph	N = 955	N = 970
Jr	N = 980	N = 1450
Sr	N = 720	N = 1140

Table 2. Student Experience and Satisfaction with Various Instructional Formats

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Instructional Format	% of Students Experiencing Instr. Format[1]		Mean Satisfaction Rating[2]		Sig.
	1973	1974	1973	1974	
Large Lecture Class	99	98	2.80	2.94*	p < .001
Small Class with Instructor-led Discussions	97	95	3.91	3.96	n.s.
Individual Research as Part of Coursework	89	90	3.53	3.57	n.s.
Group Projects as Part of Coursework	82	81	3.08	3.20*	p < .01
Lecture Class with Scheduled Discussion Sections	81	81	3.14	3.33*	p < .001
A Laboratory Course	75	65	3.30	3.45*	p < .001
Student-Led Discussion Groups	74	71	3.29	3.38*	p < .05
Team Teaching	70	65	3.40*	3.26	p < .01
Group Research as Part of Coursework	67	67	3.01	3.11*	p < .05
Videotaped Lectures	51	48	2.32	2.55*	p < .001
Courses Involving Community Experience	38	36	3.49	3.68*	p < .01
Self-Instructional Packages in Learning Laboratories	33	34	2.79	2.86	n.s
Independent Study	30	31	3.39	3.49	n.s.
Part or All of Coursework Conducted Off Campus	26	32	3.28	3.42*	p < .05
Residence Hall courses	19	18	2.94	3.13*	p < .05

[1]For 1973, n=1890; for 1974, n=1685. Satisfaction ratings were completed only by those students who experienced the format at the University.

[2]Scale: 1=Highly Dissatisfied, 2=Dissatisfied, 3=Neutral, 4=Satisfied, 5=Highly Satisfied. * Indicates higher mean satisfaction rating.

NOTE: Class means were weighted equally to arrive at the overall mean.

We make the following observations:

1. The most widely experienced instructional formats were the large lecture type class and the small class with instructor-led discussions.

2. The percentage of students experiencing a particular format did not change to any large extent from 1973 to 1974 with the exception that there were 10% fewer students who had experienced a laboratory course in 1974.

3. The small class with instructor-led discussions received the highest satisfaction rating on both years; the difference between the two years was not statistically significant.

4. Of the 15 instructional formats, 10 received significantly higher satisfaction ratings in 1974.

The development of mediated instructional materials and their implementation received heavy emphasis in the innovation program. Because the developmental effort required is extensive, it may be too early yet to assess the impact. However, the results provide some useful insights for future direction. First of all, the significant increase in mean satisfaction rating for videotape lectures is promising. Less encouraging is the fact that a similar result did not occur for self-instructional packages in which mediated materials are a key ingredient. Secondly, the relatively low satisfaction ratings for the videotape lecture and self-instructional formats indicate that the mere production of such mediated materials will not guarantee acceptance by the students. It seems clear that any movement in the direction of technology should be carefully planned and coordinated, adequately funded and fully evaluated. What may appear to be obvious is too often lacking in practice.

Community-based experiences and large lecture classes also received considerable attention among the projects funded and the evidence is favorable: both showed significant increases in student satisfaction. Further, community-based experiences were well-received by the students as suggested by the relatively high mean satisfaction rating. However, with large lecture classes it is a different matter. The relatively low mean rating very likely indicates student tolerance of such classes in general, and the question then becomes whether or not quality education can occur under such circumstances. While the present data does not provide an answer, it does serve to highlight the question.

Educational Benefits. There were 25 statements[2] concerned with educational objectives/benefits associated with college. Students were asked to respond to these statements in terms of their "actual" and "preferred" progress toward attainment on a scale which ranged from 1 (Little or None) to 5 (Very Much). A priority listing for each class was derived by ranking these statements on the basis of the mean "preferred progress" rating. In addition, these statements were also ranked on the basis of the mean "actual progress" rating. The difference between the two means for each statement can be viewed as a measure of discrepancy for that particular objective/benefit. Edited versions of these statements appear in Table 4.

The magnitude of the rank-order correlations (Table 3) indicates that no large changes in ranks occurred in the 1974 survey for the Preferred and Actual progress dimensions. The somewhat lower correlation between the junior class Discrepancy rankings for the two years was due primarily to the relatively smaller discrepancies for certain of the human relations benefits in 1974. The correlations between the Actual and Preferred ratings show that in general students tend to perceive themselves as making relatively more progress in those areas which are viewed as more important to them.

Table 3. Rank-Order Correlations of Mean Ratings for the 25 Statements of Selected Educational Benefits by Class

	Fr.	Soph.	Jr.	Sr.
Preferred progress ratings: 1973 vs. 1974	.91	.91	.97	.90
Actual progress ratings: 1973 vs. 1974	.96	.98	.91	.95
Discrepancy ratings: 1973 vs. 1974	.92	.94	.76	.88
1973: Preferred vs. Actual ratings	.61	.51	.66	.67
1974: Preferred vs. Actual ratings	.72	.62	.71	.71

NOTE: For $n = 25$, $p < .01$ for $r \geq .51$ (two-tailed test)

The mean of the rank-order correlations among the four classes for the Preferred, Actual and Discrepancy rankings were .89, .93 and .88. Because of this the means for each class were weighted equally to arrive at an overall mean for each of the three dimensions for both 1973 and 1974. The ranks of these means are reported in Table 4.

Table 4. Ranks of Educational Benefit Statements for Preferred Progress, Actual Progress and Discrepancy

Statements by Category	Preferred Progress		Actual Progress		Discrepancy	
	1973 Rank	1974 Rank	1973 Rank	1974 Rank	1973 Rank	1974 Rank
Human Relations						
Development of an identity	1	1	8	6	3	3
Social development	2	2	2	2	17	17
Personal development	4	3	4	3	16	20
Tolerance of others	3	4	1	1	23	23
Development of a personal philosophy	17	16	15	14	13	14
Vocational						
Background for further education	7	6	10	11	9	8
Vocational training	9	9	25	25	1	1
Discovery of vocational interests	15	19	21	21	4	6
Critical Thinking--to develop						
Open-mindedness	5	5	3	4	20	19
Intellectual curiosity	6	7	9	9	10	11
Ability to select appropriate information	8	8	13	13	8	9
Intellectual honesty	13	11	12	12	12	12
Desire for order	16	15	14	15	14	13
Ability to recognize assumptions	20	18	20	16	11	10
Ability to define problems	14	14	18	18	7	5
General Education						
Current issues & problems in society	10	13	19	20	2	4
Develop interests in new fields	12	12	7	7	15	18
Terminology & facts in various fields	11	10	6	8	19	15
Awareness of different cultures	18	20	5	5	24	25
Effective communication	19	17	22	22	5	2
Appreciation of moral & ethical standards	21	21	11	10	25	24
Quantitative thinking	22	22	24	23	6	7
Broadened literary appreciation	23	23	17	17	21	21
Aesthetic sensitivity	24	24	16	19	22	22

94

Understanding the nature of science	25	25	23	24	18	16

NOTE: Means ranked according to numerical value from High=1 to Low=25.

There are several observations which can be made from the table.

1. The Human Relations type benefits such as development of an identity, social development, personal development and tolerance of others ranked highest in priority. Certain benefits of a general college education well accepted by faculty, such as, development of quantitative thinking skills, broadened literary appreciation, aesthetic sensitivity, and understanding the nature of science, ranked lowest in priority.
2. Perceived actual progress was greatest for the following: tolerance of others, social development, personal development, open-mindedness and awareness of different cultures. Perceived actual progress was least for the following: vocational training, understanding the nature of science, quantitative thinking, effective communication and discovery of vocational interests.
3. Among the largest discrepancies were included the following: vocational training, development of an identity, current issues and problems in society, and effective communication. (To place the magnitude of these discrepancies in perspective, the largest value was 1.33 for "vocational training" while the smallest was .59 for "awareness of different cultures." Across all objectives, the marked tendency is for students to rate "preferred progress" higher than "actual progress.")

It is possible for gains to occur and have the ranks remain relatively stable. Thus, it might be well to consider the differences in mean ratings between the two su eys. Based on equal weighting of class means to arrive at an overall mean, significant increases ($p < .05$) were observed in Actual progress on the following: (a, Personal development-increase from 3.32 to 3.39, (b) Development of an identity-increase from 3.15 to 3.24, (c) Quantitative thinking-increase from 2.72 to 2.81. There were no significant decreases nor were any of the differences between the mean discrepancies significant.

When the differences in mean discrepancies were tested by class, four were significantly lowered ($p < .05$). However, when you consider 100 tests were run, little, if any, importance can be attached to these. By class, there were 27 differences in "Actual progress" means which were significant ($p < .05$). Ten of these indicated greater progress in the '73 survey and they occurred in total for the freshman class. The remaining 17 of the significant differences indicated greater progress in the 174 survey and were associated primarily with the junior and senior classes. The majority were in the general education and human relations area. By the nature of the project funded, it would be difficult to attribute the gains in the human relations category to the formalized program especially since there is a currently strong movement for establishing local chapters of national social fraternities and sororities.

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Our experience in dealing with faculty members regarding evaluation of their particular projects demonstrated to us the difficulty in discussing instructional objectives. Inevitably such attempts would lapse into discussions of process, that is, instructional format. It is our conjecture at this point that the gains exhibited in student satisfaction with instructional format reflect this emphasis and the lack of similar type gains regarding "Actual progress" or decreasing the discrepancy values reflects the lack of emphasis on instructional objectives.

Student Characteristics. The nature and quality of learning a student engages in is reflected to large extent by behavior during lectures and periods of study. The results in Table 5 indicate that students took notes during lectures primarily for tests as opposed to taking notes for their own interests. However, from '73 to '74 there were significant differences in the direction of higher quality learning behaviors. Again, to put the mean values in perspective, in 1974, 73% of the students indicated that "very frequently" they took notes primarily for tests opposed to 26% who indicated that "very frequently" they took notes primarily for their own interests. Regarding periods of study, there were no differences in behavior indicated between '73 and '74 with the exception that students appeared to spend more time thinking about applications of what they were studying.

Table 5. Student Behavior During Lecture Classes and Study Periods

	1973 Mean (N=950)	1974 Mean (N=2630)	Significance
During Lectures:[1]			
Take notes primarily for tests	2.68	2.58*	$p < .001$
Take notes primarily for personal interests	1.96	2.05*	$p < .001$
Relate what instructor says to other things	2.21	2.26*	$p < .05$
During Study Periods:			
Read assignments without understanding them	1.58	1.56	n.s.
Memorize facts	2.11	2.09	n.s.
Relate concepts to personal experience	2.16	2.20	n.s.
Think about applications of the material	2.12	2.22*	$p < .001$

[1]Scale: 1 = Seldom or Never; 2 = Often; 3 = Very Frequently

*Indicates more favorable value

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The extent to which individuals engage in certain kinds of activities is a reflection of their interests and attitudes. Eight brief activity scales related to broad general education objectives were selected from the KIT[3] for inclusion in the survey. These scales sampled behaviors which range from commonplace activities to those which require more effort and thus imply a more intensive level of involvement. On each scale students were asked to check those activities they had engaged in during the past year. The score for a given scale was the number of items checked. The results are presented in Table 6. One particular application of these scales which is appealing is their use as a pre- and post-measure in the evaluation of individual projects or courses. The availability of campus-wide norms for appropriate identifiable subgroups could serve as a partial solution to the problem of setting standards in the formation of goals. Such norms might be viewed as minimal standards.

Table 6. Activities and Interest in the General Culture

Scale	Number Of Items	1973 N	1973 Mean	1974 N	1974 Mean	Sig.
Art	7	769	2.98	712	2.96	n.s.
Music	9	931	6.08	830	6.02	n.s.
Literature	8	852	3.84	773	3.76	n.s
Community Affairs	7	842	2.32	721	2.36	n.s
Drama	7	902	3.90	819	4.02*	p < .10
International & Intercultural Affairs	8	808	3.17*	721	2.95	p < .01
Science	10	788	3.18*	677	2.98	p < .05
National and State Politics	10	814	3.57	774	4.01*	p < .001

*Indicates more favorable value

For students to be deeply involved in academic work and to become independent learners is considered by many faculty to be the essence of a college education. In a speculative vein, two related scales from the KIT were included. The first, titled Style of Learning-Academic, is described as measuring "the style of one's effort in relation to the acquisition of knowledge and understanding from courses and readings, such as participation in class discussions, talking with professors, devoting concentrated periods of time to academic work and reading related but unassigned work." Based on equally weighted class means, the level of participation in academic life had increased significantly ($p < .001$) among the undergraduates. The second scale, titled Intellectual Orientation, purports to measure the disposition of an individual toward the creation, development and application of new ideas and the preference for independent thought. In this case neither the difference between the weighted means nor those between the class means for the two surveys were significant.

SUMMARY. Generally, the concern of institutional research has dealt with the economic and administrative aspects of the University. We are advocating the systematic study of the educational effects of intervention activities as an equally important research function. Additionally, it is our contention that the procedure we have employed is viable during this period of tight budgets.

While the results to date are encouraging, we are very much aware of the pitfalls in attempting to attribute the positive gains directly to the formalized program in innovation. While studies of this type are not rigorous in the experimental sense and quite susceptible to criticism, they are necessary and valuable. To be sure, there are difficult technical problems. For example, how valid is the notion of perceived actual progress as a proxy measure for the more direct assessment of the outcomes of higher education? No less important is the problem of faculty acceptance. In the original evaluations of the projects it was virtually impossible to have faculty talk in terms of student outcomes. The seemingly unfamiliarity with the notion along with a distrust of behavioral measurement techniques were major contributing factors. To effectively deal with such problems and to bring about the necessary methodological refinements, greater experience with longitudinal data of the type presented here, along with the subsequent dissemination and discussion of its implications, is needed.

NOTES:

[1]See Innovation at Illinois State University, ERIC Number: EDO 82694. (A limited number of copies are available from the first author.)

[2]The statements were assembled from a variety of sources; however, the major source was the Higher Education Measurement and Evaluation Kit developed under the directorship of C. Robert Pace at UCLA, Center for the Study of Evaluation.

[3]KIT refers to the Higher Education Measurement and Evaluation Kit.

Appendix B

ILLINOIS STATE UNIVERSITY
Office of the Dean of Undergraduate Instruction
1974-1975

TO: UNIVERSITY FACULTY
FROM: STAN RIVES
RE: INSTRUCTIONAL DEVELOPMENT PROGRAM (IDP)

APPLICATION PROCEDURES

The Instructional Development Program will again provide limited funds during the 1974-75 academic year for individual faculty projects designed to improve instruction. Faculty members are invited to submit applications, using the attached form, any time prior to December 1, 1974. The proposed project should be presented as concisely and clearly as possible within the structure of the application format. Each application will be evaluated by a faculty-student committee as soon as practicable after submission. Decisions will be announced immediately thereafter. Applicants may wish to consult examples of projects completed by other faculty published in: Innovations at Illinois State University and Instructional Development at Illinois State University.

BUDGET LIMITATIONS

Budget request lines must be specified according to Budget Office instructions, which are available in department offices. Line items beyond those indicated on the form, e.g., faculty released time or salaries and equipment, are not available in this program. In addition, the program is not designed to provide funds for: (1) research projects (University Research Grants are administered through the Office of the Graduate School); (2) travel funds for attendance at regular professional meetings or conferences; (3) travel funds for student transportation; or (4) speakers. All allowable expenditures must conform strictly to the State Purchasing Regulations.

EVALUATION CRITERIA

Among the criteria which will be given major consideration by the IDP Committee are projects which:

--affect sizeable numbers of students in basic University instructional programs (e.g., University Studies, professional education courses, basic courses for majors);

--develop or refine more flexible means for learning which will be better adapted to individual capacities and needs of students;

--are well designed to improve instruction;

--fit the Academic Plan, 1974-79, of the University;

--employ funds in a reasonable and economical manner;

--have the potential for increasing the number of instructional options available to students;

--have the potential to affect the permanent program;

--represent "new" activities;

--show clear evidence of departmental support now and in the future, if necessary;

--show evidence that supplemental support services have been assured, if needed;

--expand on available resources of the University;

--are "clearly" beyond those activities which are assumed to be part of normal faculty obligations;

--cannot be expected to be supported out of regular departmental funds;

--can be completed within the time period specified.

Faculty members having approved projects will be asked to submit a report of their project on or before June 15, 1975.

Attachment: Application Form

ILLINOIS STATE UNIVERSITY
Office of the Dean of Undergraduate Instruction
1974-1975

Date _____

Application for Instructional Development Program Grant

Note: 1. Submit one (1) copy of this application signed by the Chairperson of the department and the College Dean to the Office of Undergraduate Instruction, 308 Hovey, any time prior to December 1, 1974.

2. Attachments must be limited to two single-spaced, typewritten, 8-1/2 x 11 pages.

Name: _____ Department: _____

PROJECT DESCRIPTION

a. Title:

b. Purpose (100 words or less):

c. Procedures

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d. Expected Outcomes/Products:

e. Implications for Instructional Development:

f. Budget:

	Amount Requested	Specific purpose(s) for funds requested:
Student Help	$_____	
Contractual Services	_____	
Travel	_____	
Commodities	_____	
Printing	_____	
Computer Services	_____	

g. Estimated annual continuation costs from regular departmental budget funds in subsequent years: $_____

h. Chairperson's Comments:

Chairperson's Signature: _____ Date _____

Dean's Signature: _____ Date _____

Appendix C

ILLINOIS STATE UNIVERSITY
Office of the Dean of Undergraduate Instruction

December 6, 1973

TO: UNIVERSITY FACULTY
FROM: STAN RIVES SR
RE: Applications for Summer Instructional Development Grants

We are pleased to announce the availability of a limited number of Summer Instructional Development grants for the Summer of 1974. Specifically, the Summer IDP grants will provide one month's employment for faculty members with approved projects during the period May 15 to June 30. Interested faculty may apply by submitting a completed application form to the Office of Undergraduate Instruction by February 1, 1974.

The purpose of the program is to provide faculty a bloc of time for concentrated effort on significant projects which are intended to improve the instructional program of the University. Projects may be proposed by either individual or groups of faculty members. Proposals are encouraged but not restricted to projects for the development of interdisciplinary University Studies courses, community-based education including internships and residential programming. All proposals will be evaluated on their merits by the Instructional Development Committee.

Among the criteria which will be given major consideration by the IDP Committee are projects which:

- affect sizeable numbers of students in basic University instructional programs, (e.g., University Studies, professional education programs, basic courses for majors);
- reflect an attempt to continue the development of projects already in progress;
- show a knowledge of instructional development nationally and an awareness how interdisciplinary dimensions could be utilized;
- have the potential for increasing the number of instructional options available to students;
- have the potential for increasing cooperation and communication among faculty; and
- have the potential to affect significantly the permanent program.

A copy of the proposal form is attached and faculty are invited to submit applications any time prior to February 1. Announcement of awards will be made on or about March 1.

SR./rb
Attachment

GWI 95 104

ILLINOIS STATE UNIVERSITY
Office of Undergraduate Instruction

Date _____

Application for Summer Instructional Development Appointment

Note:
1. Application must be submitted by February 1.
2. Program provides one month of assigned time for faculty members during the period May 15 to June 30. Faculty with regular Summer teaching assignments must utilize period May 15 to June 15.
3. Assigned time appointments will be awarded only to those who can demonstrate they will be engaged in a bona fide instructional development activity and agree to submit a report on project accomplishments.

1. Name:	
2. Department:	
3. Time appointment requested:	___May 15-June 15 ___June 1-June 30 Other (specify)_____
4. Summer employment:	___No ___Yes (Specify)_____
5. Type of faculty appointment:	___Continuing ____Temporary
6. If this is a joint proposal, list other faculty and departments involved:	
7. Describe in a 300-word maximum summary the instructional development project you propose. Provide: a. Title b. Description of project procedures, activities c. Description of project outcomes, results for instruction	

105

8. Are other funds requested to complete this project? If so, what specific funds are required and what is the source of funding?	
9. Describe any previous related instructional development activity including previous grants, publications, or accomplishments:	

Signatures:

I understand this application is for assigned time for instructional development activity and agree, if awarded a grant, to provide the Office of Undergraduate Instruction a report suitable for distribution on project accomplishments by July 15.

Applicant _____

Department Chairman _____

Comments:

College Dean _____

Comments:

Provide one copy with appropriate signatures to the Undergraduate Office, Hovey 308, by February 1.

Appendix D

ILLINOIS STATE UNIVERSITY
Office of the Dean of Undergraduate Instruction 3-29-74

UNDERGRADUATE TEACHING ASSISTANTSHIP POLICY

Please read carefully.

Many of the departments at Illinois State University are planning to use well-qualified undergraduates as teaching assistants in undergraduate courses. The purpose is to assist the faculty in the improvement of instruction and provide a valuable opportunity to the assistants to learn and profit from the experience.

1. Responsibilities: The responsibilities are determined by the departments with the approval of the Office of Undergraduate Instruction. The expected duties will probably differ from department to department and among the faculty within the department. Information about the duties should be obtained at the time of application. Normally, the time spent shall not exceed ten hours per week.

As is customary in all courses, the faculty member is in charge of a course utilizing undergraduate aides and retains the responsibility for course content and grading. Where UTA's are assigned the task of grading quizzes, laboratory manuals, or other student assignments, the student shall have the right to request a review of the grade by the faculty member.

2. Selection: Each application will be reviewed carefully by the department before recommendations for assignment are made. In general, the criteria will include excellence in overall scholastic achievement, demonstrated excellence in the discipline, and junior or senior standing. Recommendations of two faculty are also required. Other criteria as determined by each department may also be used.

3. Reimbursement:

Financial: The maximum compensation if $450 a semester, or $900 for the academic year. Payment is based on an hourly rate of $3.00 per hour.

Credit: Some, but not all departments provide the opportunity for credit to be earned in a 389 course labeled: "Undergraduate Teaching Experience in (discipline)." One, two, or three hours of credit may be awarded as long as the student is a UTA; however, THREE HOURS IS THE MAXIMUM OF THIS CREDIT THAT MAY BE ALLOWED FOR GRADUATION.

4. Evaluation: At least twice during the semester, each UTA is expected, by the Office of Undergraduate Instruction, to complete an evaluation of their experiences. Each department may also ask for additional information.

Announcement of awards will be made by the Office of Undergraduate Instruction as soon as possible after the nominations have been received from the respective departments.

ILLINOIS STATE UNIVERSITY
Office of the Dean of Undergraduate Instruction 3-29-74

Application for Undergraduate Teaching Assistantship

Instructions: Information on departments participating in UTA program and courses/activities in which UTA positions are available may be obtained in departmental offices or the Office of the Dean of Undergraduate Instruction (Hovey 308). Complete and submit this form to the departmental office in which application is made for the UTA. Please type or print information.

Name _____ Date _____
(last) (first)

Major _____ Social Security # _____

Campus Address _____ Campus Phone _____

Home Address _____

1. Statement of student's qualifications and reasons for applying for Undergraduate Teaching Assistantship. (State qualifications and reasons for applying on back of this page.)
2. Department in which application is made for UTA: _____
3. Student's current overall ISU grade point average: _____
   Student's current grade point average in field of UTA application: _____
4. College courses completed with grades in field of UTA application. (Please list--e.g., Chemistry 140--B, Chemistry 141--A)

5. Recommendations requested from the following two faculty members, including, if possible, the faculty member teaching the course for which UTA application is made:

   Faculty Name _____ Department _____

   Faculty Name _____ Department _____

Note: The student should request these two faculty members to submit a recommendation to the chairman of the department in which the student is making the UTA application.

(Completed by department and forwarded to the Dean of Undergraduate Instruction)

_____ Application Approved Department _____

Period of appointment: _____, 19__ to _____, 19__.
Course/Activity Assignment: _____
Faculty Supervisor: _____
Date _____ Chairman: _____

(Completed by the Dean of Undergraduate Instruction)

_____ Application Approved Date _____
_____ Application NOT Approved Signature _____

Index

Accounting, 6.
Achievement testing, 9.
Advanced Learning Projects, 35.
Advisement, 15.
Agricultural blueprints and drawings, 10.
Agricultural power units, 8.
Agriculture, 8, 10, 11, 17, 26, 27.
Albert, Richard, 26.
ALEX, 6.
ALPS, 35.
American experience, 22.
Analysis of programs, 26.
Anderson, Frances E., 12.
Anthropology, 9, 14, 55.
Anthropology Laboratory, 9.
Archeology, 9, 14.
Art, 4, 12, 24, 25.
Art Curriculum and Research Center, 12.
Audio cassette lectures, 18.
Audio cassettes, 4, 6, 18.
Audio tapes, 9, 11, 13, 14, 15, 16, 23.
Audio-tutorial laboratory, 11.
Audiovisual materials, 4, 8.
Austensen, Roy, 4.
Automated Instruction:
- Audio-tutorial laboratory, 11.
- Computer assisted instruction (CAI), 7, 10, 20.
- PYRAMID, 17.

Baker, Paul J., 4.
Banner, Richard, 30.
Bauer, Everett, 39.
Bell, Claude, 47.
Bellas, Ralph, 24.
Berson, Minnie, 21.
Bibliographies, 5, 22.
Biological Sciences, 7.
Blankenship, Scott, 5.
Borkovic, Embrie, 55.
Botany, 7.
Bowen, Frank, 20.
Brake, Robert J., 5, 6, 27.
British civilization, 24.
Buehlmann, David M., 6.
Burrows, Robert, 25.
Business Administration, 39.

CAI, 7, 10, 20.
Calavan, Michael, 55.
Caldwell, Tom, 39.
Cantrell, Rick, 47.
Catalogues, 5, 9.
CBI, 47.
Chasson, Robert M., 7.
Chemistry, 24.
Chesebro, Pat, 35.
Children's art, 12, 24.
Children's literature, 5.
Chizmar, John, 7, 20.
Cinematographical analysis, 16.
Clack, R. James, 20.
Cohen, Ira, 8.
Collections
- Agricultural blueprints and drawings, 10.
- Audio-cassette lectures on speech communication, 18.
- English history slides, 14.
- Film library of sports skills, 16.
- International collection of children's art, 12, 24.
- Music scores and tapes, 13.
- Native American artifacts, 9.
- Political extremism tapes and papers, 11, 23.
- Videotapes of instructional strategies, 14.

Communication
- Criticism, 6.
- Manual, 16.
- Non-verbal, 5.
- Speech, 5, 18, 27.
- Verbal, 5.

Competency-based instruction (CBI), 11, 47.
Computer applications, 24.
Computer assisted instruction (CAI), 7, 10, 20.
Computer programs acquired
- Macro-economic models, 20.
- Michigan Experiment Simulator Supervisor (MESS), 10.

Consultants, 9.
Northwestern University faculty, 6, 16.
Scherer, Patricia, 16.
Conyne, Robert, 20.
CORE programs, 8, 15, 25, 49.
Couch, Peter, 20.
Counseling, 6, 20.
Course development
Experimental, 4, 17, 23, 27, 41.
Intercultural, 4.
Multidisciplinary, 4, 22, 24, 25.
New, 9, 20, 22, 24.
Proposed, 15, 20, 27.
Revisions, 4, 5, 6, 8, 13, 15, 16, 21, 22, 23, 24, 26, 30, 32.
Cragan, John, 5, 27.
Curriculum and Instruction, 5, 8, 12, 20, 21, 25, 26, 44.

Data base, 15, 37.
Deaf education, 16.
Dirks, Robert, 55.
Development of programs, 21, 22, 25, 39.
Dewey Decimal Classification, 17.
Diagnostic testing, 6.
Discussion sections (groups), 55.
Doctor of Arts (History), 9, 22.
Downs, Nuel, 9.
Duncan, Robert, 4.

Economics, 7, 13, 20, 21.
Educational psychology, 35.
Edwards, Philip, 22.
Eimermann, Thomas, 21.
English, 4, 10, 22, 24, 26, 41.
English history, 14.
Evaluation of programs, 12.
Ewing Museum of Nations, 12, 24.
Exceptional children, 15.
Experimental course, 4, 17, 23, 27, 41.
External evaluators
Feldhusen, John, 35.
Ford, Ken, 32.
Harootunian, Berj, 12.
Reagan, Gerald M., 12.
Rosenblatt, Bernard, 52.
Worthington, Robert, 47.

Film library of sports skills, 16.
Films, 9, 11, 16.
Filmstrips, 6.
Firestone, Frederic, 21.
Fitch, Thomas, 21.
Flexible schedule, 49.
Foreign Languages, 4, 25.
Forgey, George W., 8.
Foundations of education, 12.
Frahm, Charles, 32.
French, 25.
Fritzen, Bodo, 4.
Fuess, Frederick W., 11.

Games, 7, 14, 30.
German civilization, 4.
Gill, Noel, 35.
Gnagey, William, 35.
Goebel, Barbara, 35.
Goodall, Robert, 8.
Graduate student actors, 52.
Gray, Charles E., 9, 22.
Group Instruction:
CORE programs, 8, 15.
Discussion sections (groups), 55.
Flexible schedule, 49.
Integrated teaching, 4.
Large group instruction, 55.
Lecture, 7, 20.
Mastery learning, 17, 35, 41.
Mini-course, 20, 44.
Modular instruction, 4, 16, 35, 39.
Multidisciplinary instruction, 4, 22, 24, 25.
Slide lecture, 14.
Small group instruction, 5, 20.
Team instruction, 35.

Halinski, Ronald S., 8, 27, 37, 79.
Hall, Gordon D., 11.
Hansen, Arne, 9.
Hartley, Douglas, 4, 25.
Hathway, Robert, 9.
Health, Physical Education and Recreation, 16, 22, 27.
Health related agencies, 27.
Heissler, John, 41.
Hemenway, Robert, 39.
Henry, Reginald D., 10.
Herberts, Roger, 47.
High-speed photography, 16.
Hill, John S., 22.

Hill, Sherron, 25.
Hirsch, Robert O., 5.
History, 4, 8, 9, 14, 22, 24.
History Teaching Materials Center, 9, 22.
Hobbs, Jack, 12.
Home Economics and Industrial Technology, 47.
Humanities, 4, 22, 24, 25.

Impressionism, 25.
Individualized Instruction:
- Advanced learning projects (ALPS), 35.
- Competency-based instruction (CBI), 47.
- Learning activity packages (LAPS), 11.
- Personalized system of instruction (PSI), 32.
- Remedial instruction, 7, 8.
- Self-paced learning, 4, 6, 7, 8, 11, 22, 23, 32.

Information Sciences, 5, 17, 18, 27.
Information Sciences Resource Center, 5, 18.
Institutional survey, 37.
Instructional packages, 6, 7, 8, 11, 22, 23, 25, 32, 44.
Instructional strategies, 14.
Integrated teaching, 4.
Intercultural course, 4.
International collection of children's art, 12, 24.
Interracial dynamics, 20.

Jabker, Eugene H., 60.
Jelks, Edward B., 9, 14.
Johnston, John, 47.
Jones, Margaret, 22.
Jorgensen, Margaret, 35.

Kagle, Steven, 41.
Karch, Jacqueline, 47.
Kennedy, Larry, 44.
Kinesiology, 22.
King, John F., 10.
Kirk, John, 24.
Koch, James V., 7.
Kohn, Walter S. G., 4.

LAPS, 11.
Large group instruction, 55.
Learning Activity Packages (LAPS), 11.
Lecture, 7, 20.
Lee, Dorothy, 23.
Lemke, Elmer, 23.
Library-research manual, 10.
Library science, 17.
Linneman, William, 10.
Loepp, Franzie, 47.
Lorber, Michael, 8.
Lynn, Mary Ann, 11.

Macroeconomics, 7, 20.
Managerial and Organizational Problems, 20.
Mastery learning, 17, 35, 41.
Mathematics, 9, 14, 16, 26.
Mathematics education, 14.
Mathematics Test and Resource Center, 16.
McBee, James L., Jr., 11.
Mead, Walter B., 11, 23.
Measurement and Evaluation, 8.
Measurement and Evaluation Services, 27, 37.
Media acquired
- ALEX, 6.
- Audiotapes, 9, 11, 23.
- Audiovisual materials, 8.
- Games, 14.
- Instructional packages, 6.
- Self-paced materials, 9.
- Simulations, 10, 14, 20.
- Videotapes, 9.

Media produced
- Audio cassettes, 6, 18.
- Audiotapes, 13, 14, 15, 16.
- Audiovisual materials, 4.
- Films, 9, 16.
- Filmstrips, 6.
- Games, 30.
- High-speed photography, 16.
- Instructional packages, 7, 8, 11, 22, 23, 25, 32, 44.
- Simulations, 20, 30.
- Slides, 7, 8, 12, 14, 17, 25.
- Sound-slide presentations, 12, 24.
- Transparencies, 13.
- Videotapes, 5, 12, 14, 15, 16, 20, 23.
- Videotape (color), 25.
- Videotape series, 13.

Media Services, 15.
Meske, Eunice, 49.
Metcalf Music Laboratory, 49.
Microeconomics, 7.
MICROMOD, 7.
Miller, Duncan, 49.
Miller, Kenneth, 26.
Miller, Larry, 47.
Milliren, Al, 21.
Mincey, Ethel, 21.
Mini-course, 20, 44.
Modular instruction, 4, 16, 35, 39.
Moore, Barry, 12, 23.
Morris, Jeanne, 21.
Multidisciplinary instruction, 4, 22, 24, 25.
Music, 4, 13, 15, 25, 49.
Music Resource Center, 13.
Music scores and tapes, 13.

Native American artifacts, 9.
Nelson, Thomas W., 12.
New course, 9, 20, 22, 24.
Nolte, Ann, 27.

Off-campus programs, 4, 24, 39.
Office of Undergraduate Instruction, 60.
Omer, Fred, 25, 49.
Otto, Albert D., 16.
Outlines, 20, 22, 27.

Paralegal education, 21.
Personalized System of Instruction (PSI), 32.
Philosophy of education, 5.
Physics, 22, 32.
Placement testing, 15, 26.
Poe, Douglas, 13.
Political extremism, 11, 23.
Political Science, 4, 11, 15, 20, 23.
Poultney, David, 13.
Printed materials produced:
  Bibliographies, 5, 22.
  Catalogues, 5, 9.
  Library-research manual, 10.
  Outlines, 20, 22, 27.
  Proposals, 21, 24.
  References, 20, 22, 23, 25, 27.

Pritner, Calvin, 52.
Professional Sequence, 26, 44.
Proficiency examination, 15, 26.
Program
  Analysis, 26.
  Development, 21, 22, 25, 39.
  Proposed, 21, 24.
  Recommendations, 21, 26.
Proposals, 21, 24.
Proposed course, 15, 20, 27.
Proposed programs, 21, 24.
PSI, 32.
Psychology, 10, 17, 20, 23, 26, 35.
PYRAMID, 17.

Quane, Larry, 47.

Ramseyer, Gary, 26.
Rapin, Lynn, 20.
Recommendations for programs, 21, 26.
References, 20, 22, 23, 25, 27.
Rehm, John, 13.
Reitan, Earl, 14, 24.
Reiter, Richard C., 24.
Remedial instruction, 7, 8.
Resource centers
  Anthropology laboratory, 9.
  Art curriculum and research center, 12.
  Ewing Museum of Nations, 12, 24.
  History teaching materials center, 9, 22.
  Information Sciences resource center, 5, 18.
  Mathematics test and resource center, 16.
  Media Services, 15.
  Metcalf music laboratory, 49.
  Music resource center, 13.
  Secondary mathematics materials center, 14.
Retesting, 16.
Retzer, Kenneth A., 14.
Revised course, 4, 5, 6, 8, 13, 15, 16, 21, 22, 23, 24, 26, 30, 32.
Reyman, Jonathan, 14, 55.
Rives, Stanley G., 1, 60.
Roberts, Frederick J., 15.
Romeo, Robert, 52.

Rosene, Paul E., 15, 49.
Roussey, Robert, 25.

Sanders, Herbert, 4, 25.
Second law of thermodynamics (economics), 21.
Secondary Mathematics Materials Center, 14.
Self-paced learning, 4, 6, 7, 8, 11, 22, 23, 32.
Sharpham, John, 25.
Sherman, Charles, 35.
SIMRAD, 30.
Simulations, 10, 14, 20, 30.
Slan, Arnold, 25.
Slide lecture, 14.
Slides, 4, 7, 8, 12, 14, 17, 25.
Small group instruction, 5, 20.
Smith, Dorothea, 35.
Social psychology, 23.
Sociology-Anthropology, 4, 9, 14, 23, 55.
Sound-slide presentations, 12, 24.
Special Education, 16, 39.
Spence, Lawrence, 16, 26.
Stearns, Keith, 39.
Stephens, Joann, 16.
Student Association, 30.
Student staff, 30.
Summers, Michael, 20.
Surveys of:
  Academic records, 60.
  Achievement, 9.
  Community resources, 27.
  Goals, 15, 27.
  Graduates, 47.
  Practices, 4, 15, 21.
  Student characteristics, 9, 15, 16, 37, 79.

Talkington, Joe, 47.
Tcheng, Tse-Kia (Kup), 79.
Teacher performance tests, 26.
Teaching strategies, 5, 14, 22.
Team instruction, 35.
Tests
  Achievement, 9.
  Diagnostic, 6.
  Placement, 15, 26.
  Proficiency, 15, 26.
  Repeated, 16.
  Teacher performance, 26.
Theatre, 24, 25, 52.
Thompson, James, 26.
Transparencies, 13.
Truex, Wayne O., 16.
Tutoring, 16.
Typewriting, 11.

Undergraduate teaching assistants, 4, 20, 22, 41, 60.
University High School, 11, 26.
University museums, 9.
University Studies, 4, 17, 20, 26, 27.
Upton, Charlotte, 47.
Urban history, 8.

Vernon, Walter M., 17.
Videotapes, 5, 9, 12, 13, 14, 15, 16, 20, 23, 25.

Waimon, Margaret, 35.
Waimon, Mort, 26.
Weede, Gary, 47.
Weller, Roger, 27.
Wieck, David, 37.
Wilford, Valerie, 17.
Wisely, Forrest, 17, 27.
Woods, Harvey, 17, 27.
Wright, David W., 18.

Young, Robert, 32.
Youngs, Richard, 8.